

Meat Processing

Meat Processing is an instructional program that orients an individual to the field of meat processing, marketing, and merchandising. This course allows an individual to prepare for employment or continued education in the meat cutting, packing, and processing professions. Topics include careers, leadership, and orientation; safety, sanitation, equipment, and facility maintenance; livestock slaughter procedures; and pricing, wrapping, and marketing meats.

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Identification of the Methods of Processing Poultry

Identify Methods of Processing Fish
Recognition of Principles of Meat Preservation and Packaging
Explain the Preparation of Eggs for Market
Recognizing the Procedures Involved in the Marketing of Food Products

Meat Processing Content Guideline

(The Student will be able to...)

Knowledge of the Employability Characteristics of a Successful Worker in the Modern Workplace

Identifying Career, Employment, and Entrepreneurship Opportunities in the Field of Meat Processing
Allocating Resources in Meat Processing
Using Various Information Processing Procedures in Meat Processing
Improving Interpersonal Relations in Meat Processing
Promoting Social, Organizational, and Technological Systems in Meat Processing
Selecting and Applying Technology in Meat Processing
Demonstrating Personal and Occupational Safety in the Meat Processing Workplace
Planning and Managing Supervised Agricultural Experience Programs

Recognition of the Relationship of the Meat Industry in the Free Enterprise system

Identifying Business Opportunities within the Meat Industry
Identifying Government Concerns when Establishing a Business in the Meat Industry

Explanation of the Trends in the Consumption of Meat Products

Analyzing the History and Future Trends of the Meat Industry
Recognizing Why the Consumer is 'Boss'

Demonstration of Work Ethics, Customer Relation Skills, and Management Competencies Consistent with Industry Expectations

Developing Work-Related Ethics
Formulating Professional and Ethical Work Habits
Establishing Favorable Relations with Customers

Recognition of Procedures Related to Safe Manufacture of Foods Through Hygienic Food Handling and Processing

Identifying Components of Good Manufacturing Practices (GMP)
Preventing Food Borne Illness
Control of Insects and Rodents in the Food Industry
Preparing Livestock Carcasses for Market

Recognition of Food Safety Laws that Affect the Meat Industry

Identifying Government Agencies and Regulations Involved in the Meat Industry
Recognizing the Use and Purpose of Different Inspections
Inspection Standards for the Food Industry

Recognition of Facility and Equipment Maintenance and Sanitation Procedures

Identifying Sanitation Standard Operating Procedures (SSOPs)
Developing a Sanitation Schedule
Recognizing Requirements for Food Processing Facilities
Chemicals for Sanitation in the Food Industry

Description of Hazard Analysis-Critical Control Point Implementation

Identifying the Main Principles of a HACCP System
Managing a HACCP system

Explanation of Factors that Affect Meat Palatability

Recognizing Meat Palatability

Recognizing Meat Cookery Methods

Identification of Muscles and Bone, and Fat

Recognizing Muscle, Bone and Fat

Analyze Methods of Inspecting and Grading Meats

USDA Inspection of Beef, Pork and Lamb

Evaluating and Grading Carcasses and Wholesale Cuts

Identify Methods of Fabricating Meats

Wholesale and Retail Cuts of Beef, Pork, and Lamb

Preparation of Processed Meats

Identification of the Methods of Processing Beef

Recognizing the Beef Harvesting Process

Evaluating Beef Carcasses

Fabricating Beef Carcasses

Identifying Value-Added Products of Beef

Identification of the Methods of Processing Pork

Recognizing the Pork Harvesting Process

Evaluating Pork Carcasses

Fabricating Pork Carcasses

Identifying Value-Added Products of Pork

Curing Pork Products

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Recognizing the Lamb and Goat Harvesting Process
Evaluating Lamb and Goat Carcasses
Fabricating Lamb and Goat Carcasses
Identifying Value-Added Products of Pork

Identification of the Methods of Processing Game

Recognizing the Game Harvesting and Fabrication Process

Identification of the Methods of Processing Poultry

Recognizing the Poultry Harvesting Process
Evaluating Poultry Carcasses
Identifying Retail Cuts and Value-Added Products of Poultry

Identify Methods of Processing Fish

Classes and Qualities of Fish and Seafood
Preparing Fish for Food
Processing Seafood and Fabricating Specialty Fish Products

Recognition of Principles of Meat Preservation and Packaging

Packaging Red Meat, Poultry, Fish, Game, and By-Products
Proper Storage Procedures for Red Meat, Poultry, Fish, Game and By-Products
Identifying By-Products of the Meat Industry

Explain the Preparation of Eggs for Market

Handling and Storing of Eggs
Grading Eggs
The Egg Marketing Process

Recognizing the Procedures Involved in the Marketing of Food Products

Purpose and Importance of Marketing

Types of Agricultural Markets

The Food Marketing Process

Pricing, Labeling, and Displaying Food Products

Maintaining Stock and Quality Control of Food Products

Convenience Foods in Consumer Preference

Agriscience/Agribusiness : Agricultural Literacy K-12

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Agriscience/Agribusiness : Personal Development

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Agriscience / Agribusiness: Agribusiness

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AB-B-2	- Explaining the reasons for and effects of unemployment	9-12
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AB-D-4	- Discussing the impact of the customer on markets, sales, and services	9-12
AB-E-1	- Understanding how the factors of production are organized and how they differ between systems	9-12
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Agriscience/Agribusiness : Biotechnology in Agriculture

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BT-B-2	- Exploring ethical issues in biotechnology	9-12
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Agriscience/Agribusiness : Agricultural Processing

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CURRICULUM GUIDE FOR MEAT PROCESSING

Developed
By



Department of Agricultural Leadership, Education, and Communication
Texas A&M University
College Station, Texas

In
Cooperation With

Louisiana Department of Education
Career and Technology Education
Agricultural Science and Technology Education
Baton Rouge, Louisiana

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- (4) nondiscriminatory practices in the hiring, assigning, promoting, paying, demoting, reassigning, or dismissing of faculty and staff who work with children;
- (5) enrollment and assignment of students without discrimination on the basis of race, color, or national origin;
- (6) nondiscriminatory practices relating to the use of a student's first language; and
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Instructional Materials Service

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USING THE CURRICULUM GUIDE FOR MEAT PROCESSING

The Curriculum Guide for *Meat Processing* helps instructors and administrators organize and document lessons. *Meat Processing* is an agricultural industry course recommended for students in grades 10-12. This course is designed for 180-hours (1 credit), two-semester course instruction which will enable the student to attain an industry-based certification (IBC). The instructional program is compatible with, but not limited to full semester, trimester, block, or accelerated-block scheduling formats.

The Louisiana Agriscience Benchmark Framework (LABF) for *Meat Processing* are listed on page 1. These benchmarks define the curriculum framework for the instructional program.

Pages 3 through 8 contain an instructional delivery outline to graphically show how the various areas of instruction may be applied. The first column identifies the units and/or topics of instruction. The second column lists the suggested hours of instruction for each unit and/or topic area. The third column aligns the units and topics of instruction to the LABF. The fourth column shows the catalog numbers of Instructional Materials Service (IMS) curriculum materials that teachers may use to satisfy the essential knowledge and skill requirements for each unit and/or topic of instruction.

Units of Instruction “A through R” are aligned to the Louisiana Agriscience Benchmark Framework and are course specific to *Meat Processing*.

Pages 9 through 29 in the curriculum guide state the unit and topic goals and objectives, and the specific objectives to be met upon completion of each topic. On some topics, more than one suggested item of curriculum material may be listed for effective instructional presentation. This section should be particularly useful to teachers in preparing lesson plans and selecting materials to meet individual student's needs.

Each IMS student material topic contains a list of references used in its development. If a more detailed presentation of subject matter is necessary, the teacher may acquire some of these references from IMS and/or from the publishers cited in the reference section of the student material topic.

Pages 30 through 33 provide a listing of additional sources and titles of meat processing curriculum materials.

Louisiana Agriscience Benchmark Framework for Meat Processing

Agriscience/Agribusiness: Agricultural Literacy K-12

AL-C-5 Discussing jobs involved with agriculture.

Agriscience/Agribusiness: Personal Development

PD-D-1 Exploring agricultural related occupations.

PD-D-2 Developing agriculture work experiences.

PD-D-3 Participating in agricultural career events.

PD-D-4 Developing job seeking and keeping skills.

Agriscience/Agribusiness: Agribusiness

AB-A-1 Identifying various production practices of the world.

AB-A-2 Determining the factors that affect the development of production practices.

AB-A-4 Discussing problems affecting agricultural production worldwide.

AB-B-1 Identifying occupational preferences.

AB-C-1 Explaining the reasons for and effects of unemployment.

AB-C-2 Exploring various buying decisions.

AB-C-4 Describing the desirable characteristics of a good salesperson.

AB-D-1 Explaining the laws of supply and demand.

AB-D-2 Understanding the agricultural market, sales, and service systems.

AB-D-3 Discussing marketing costs and margins.

AB-D-4 Discussing the impact of the customer on markets, sales, and services

AB-E-1 Understanding how the factors of production are organized and how they differ between systems.

Agriscience/Agribusiness: Biotechnology in Agriculture

BT-D-1 Understanding the purposes for animal biotechnology.

BT-D-2 Distinguishing between traditional animal breeding and genetic engineering of animals.

BT-D-3 Selecting ways to use biotechnology for making changes in animals and animals products.

BT-E-1 Understanding microorganisms and relationships to food processing and the environment.

Agriscience/Agribusiness: Animal Systems

AS-B-1 Describing and understanding the anatomy and physiology of livestock, poultry, and other animals.

AS-C-1 Understanding reproduction of livestock, poultry, and other animals.

Agriscience/Agribusiness: Plant Systems

PS-G-1 Understanding the role of modern-day horticultural crop production.

PS-H-3 Understanding the concepts and skills related to successful employment.

Agriscience/Agribusiness: Agricultural Processing

AP-A-1 Understanding and complying to federal and state standards.

AP-A-2 Explaining and analyzing the process of slaughtering, packaging, and distributing.

AP-B-1 Explaining the handling, processing, and distributing of fresh milk and milk products.

AP-D-1 Understanding USDA regulatory programs.

AP-E-1 Describing the various careers associated with agricultural processing and the occupational outlook.

MEAT PROCESSING

Units and Topics of Instruction	Suggested Hours of Instruction	Louisiana ABF	Alignment to Curriculum Material
A. Knowledge of the Employability Characteristics of a Successful Worker in the Modern Workplace	19		
1. Identifying Career, Employment, and Entrepreneurship Opportunities in the Field of Meat Processing	4	PD-D-1,4 AL-C-5 AB-C-1	8000 8551-A
2. Allocating Resources in Meat Processing	2	PD-D-2	8000
3. Using Various Information Processing Procedures in Meat Processing	2	PD-D-2	8000
4. Improving Interpersonal Relations in Meat Processing	2	PD-D-2	8000
5. Promoting Social, Organizational, and Technological Systems in Meat Processing	1	PD-D-2	8000
6. Selecting and Applying Technology in Meat Processing	2	PD-D-2	8000
7. Demonstrating Personal and Occupational Safety in the Meat Processing Workplace	2	PD-D-2 AB-A-2	8000
8. Planning and Managing Supervised Agricultural Experience Programs	4	PD-D-2,3	8000, 8502 8002C, 8002D SAEP-E

Units and Topics of Instruction	Suggested Hours of Instruction	Louisiana ABF	Alignment to Curriculum Material
B. Recognition of the Relationship of the Meat Industry in the Free Enterprise System	4		
1. Identifying Business Opportunities within the Meat Industry	2	AP-E-1	8552-A
2. Identifying Government Concerns When Establishing a Business in the Meat Industry	2	AP-E-1	8552-B
C. Explanation of the Trends in the Consumption of Meat Products	6		
1. Analyzing the History and Future Trends of the Meat Industry	3	AB-A-2,4	8553-A 8409
2. Recognizing Why the Consumer is "Boss"	3	AB-A-2,4	8553-B
D. Demonstration of Work Ethics, Customer Relation Skills, and Management Competencies Consistent with Industry Expectations	6		
1. Developing Work-Related Ethics	2	AB-D-2 AB-E-1	8739-C
2. Formulating Professional and Ethical Work Habits	2	AB-D-2 AB-E-1	8739-B 8740-E 8736-C
3. Establishing Favorable Relations with Customers	2	AB-D-2 AB-E-1	8554-A

Units and Topics of Instruction	Suggested Hours of Instruction	Louisiana ABF	Alignment to Curriculum Material
E. Recognition of Procedures Related to Safe Manufacture of Foods Through Hygienic Food Handling and Processing	8		
1. Identifying Components of Good Manufacturing Practices (GMP)	3	AP-A-2 BT-E-1	8555B
2. Preventing Food Borne Illness	2	AP-A-2 BT-E-1	8555-A
3. Control of Insects and Rodents in the Food Industry	1	AP-A-1	8655-B
4. Preparing Livestock Carcasses for Market	2	AP-A-2	8656
F. Recognition of Food Safety Laws that Affect the Meat Industry	5		
1. Identifying Government Agencies and Regulations Involved in the Meat Industry	1	AP-A-1	8556-A
2. Recognizing the Use and Purpose of Different Inspections	2	AP-A-1	8655-A 8655-B 8657
3. Inspection Standards for the Food Industry	2	AP-A-1	8655-A
G. Recognition of Facility and Equipment Maintenance and Sanitation Procedures	7		
1. Identifying Sanitation Standard Operating Procedures (SSOPs)	2	BT-E-1	8557-A 8655-C
2. Developing a Sanitation Schedule	2	BT-E-1	8557-B
3. Recognizing Requirements for Food Processing Facilities	2	BT-E-1 AP-A-1	8557-C
4. Chemicals for Sanitation in the Food Industry	1	AP-A-1	8655-C

Units and Topics of Instruction	Suggested Hours of Instruction	Louisiana ABF	Alignment to Curriculum Material
H. Description of Hazard Analysis-Critical Control Point Implementation	5		
1. Identifying the Main Principles of a HACCP System	3	BT-E-1	8558-A
2. Managing a HACCP System	2	BT-E-1	8558-B
I. Explanation of Factors that Affect Meat Palatability	3		
1. Recognizing Meat Palatability	2	AB-C-2 BT-D-1,2,3	8559-A
2. Recognizing Meat Cookery Methods	1	AB-C-2 BT-D-1,2,3	8559-B
J. Identification of Muscles and Bones	2		
1. Recognizing Muscle, Bone, and Fat	2	AP-A-2 PD-D-2	8392 8646-C 8646-D
K. Analyze Methods of Inspecting and Grading Meats	4		
1. USDA Inspection of Beef, Pork, and Lamb	1	AP-A-1 AP-D-1	8657
2. Evaluating and Grading Carcasses and Wholesale Cuts	3	AP-A-2	8820-A
L. Identify Methods of Fabricating Meats	5		
1. Wholesale and Retail Cuts of Beef, Pork, and Lamb	2	AP-A-2	8010
2. Preparation of Processed Meats	3	AP-A-2	8658

Units and Topics of Instruction	Suggested Hours of Instruction	Louisiana ABF	Alignment to Curriculum Material
M. Identification of the Methods of Processing Beef	17		
1. Recognizing the Beef Harvesting Process	3	AP-A-2 PD-D-2	8561-A 8656 8662
2. Evaluating Beef Carcasses	5	AS-B-1	8561-B 8010 8820-A
3. Fabricating Beef Carcasses	5	AP-A-2 PD-D-2	8561-C
4. Identifying Value-Added Products of Beef	4	AB-D-2,4	8561-D 8658 8661-A
N. Identification of the Methods of Processing Pork	19		
1. Recognizing the Pork Harvesting Process	3	AP-A-2 PD-D-2	8562-A 8656 8662
2. Evaluating Pork Carcasses	5	AS-B-1	8562-B 8010 8820-A
3. Fabricating Pork Carcasses	5	AP-A-2 PD-D-2	8562-C
4. Identifying Value-Added Products of Pork	5	AB-D-2,4	8562-D 8658 8661-A
5. Curing Pork Products	1	AP-A-2 PD-D-2	8562-E

Units and Topics of Instruction	Suggested Hours of Instruction	Louisiana ABF	Alignment to Curriculum Material
O. Identification of the Methods of Processing Lamb and Goat	16		
1. Recognizing the Lamb and Goat Harvesting Process	3	AP-A-2 PD-D-2	8563-A 8656 8662
2. Evaluating Lamb and Goat Carcasses	5	AS-B-1	8563-B 8010 8820-A
3. Fabricating Lamb and Goat Carcasses	5	AP-A-2 PD-D-2	8563-C
4. Identifying Value-Added Products of Lamb and Goat	3	AB-D-2,4	8563-D 8658 8661-A
P. Identification of the Methods of Processing Game	8		
1. Recognizing the Game Harvesting and Fabrication Process	8	AP-A-2 PD-D-2	8564-A
Q. Identification of the Methods of Processing Poultry	11		
1. Recognizing the Poultry Harvesting Process	4	AP-A-2 PD-D-2	8659-A
2. Evaluating Poultry Carcasses	3	AS-B-1	8644-B
3. Identifying Retail Cuts and Value-Added Products of Poultry	4	AP-A-2 PD-D-2 AB-D-2,4	8659-B 8662

Units and Topics of Instruction	Suggested Hours of Instruction	Louisiana ABF	Alignment to Curriculum Material
R. Identify Methods of Processing Fish	5		
1. Classes and Qualities of Fish and Seafood	2	AP-A-2	8660-A
2. Preparing Fish for Food	1	AP-A-2	8660-B
3. Processing Seafood and Fabricating Specialty Fish Products	2	AP-A-2	8660-C
S. Recognition of Principles of Meat Preservation and Packaging	5		
1. Packaging Red Meat, Poultry, Fish, Game, and By-products	1	AP-A-2	8661-B
2. Proper Storage Procedures for Red Meat, Poultry, Fish, Game, and By-products	2	AP-A-2	8661-A 8661-C 8520
3. Identifying By-products of the Meat Industry	2	AP-A-2	8662
T. Explain the Preparation of Eggs for Market	4		
1. Handling and Storage of Eggs	1	AS-B-1 AS-C-1	8663-A
2. Grading Eggs	2	AS-B-1 AS-C-1	8663-B
3. The Egg Marketing Process	1	AB-D-2,3	8663-C

Units and Topics of Instruction	Suggested Hours of Instruction	Louisiana ABF	Alignment to Curriculum Material
U. Recognizing the Procedures Involved in Marketing of Food Products	7		
1. Purpose and Importance of Marketing	1	AB-D-4	8714-A
2. Types of Agricultural Markets	1	AB-D-2	8714-D
3. The Food Marketing Process	2	AB-D-2,3	8667-A
4. Pricing, Labeling, and Displaying Food Products	1	AB-E-1	8667-B
5. Maintaining Stock and Quality Control of Food Products	1	AB-E-1	8667-C
6. Convenience Foods in Consumer Preference	1	AB-D-4	8667-D
V. Local Option/Adaptation	7		
1. <u>Available hours to be used as needed</u>	<u>14</u>		
Total Classroom Hours	180		

MEAT PROCESSING AGRIBUSINESS 441

UNIT A: KNOWLEDGE OF THE EMPLOYABILITY CHARACTERISTICS OF A SUCCESSFUL WORKER IN THE MODERN WORKPLACE

Topic A-1: Identifying Career, Employment, and Entrepreneurship Opportunities in the Field of Meat Processing

**Suggested Hours of Instruction: 4
PD-D-1,4; AL-C-5; AB-C-1
Reference(s): 8000, 8551-A**

Topic Goal:

The student shall be provided the opportunity to identify career, employment, and entrepreneurship opportunities in meat processing related occupations and the characteristics and skills demonstrated by effective employees and employers.

Topic Objectives:

After completing the topic, the student shall be able to:

1. examine the elements and advantages of the free enterprise system;
2. explain the role of a small business in the free enterprise system;
3. discuss factors that motivate entrepreneurs and self-employment;
4. identify characteristics of a successful entrepreneur;
5. recognize opportunities for business ownership;
6. explain the risk and profit motive factor;
7. illustrate the importance of the application of organizational policies and procedures;
8. identify ethical practices and responsibilities;
9. discuss career opportunities in agricultural-related occupations and the need for continued education for advancement;
10. identify effective methods to secure and terminate employment;
11. demonstrate effective written and oral skills;
12. follow through on assigned tasks;
13. demonstrate dependability and punctuality;
14. describe productive work habits and attitude;
15. develop pride in the quality of work performed;
16. recognize the dignity of work;
17. develop skills in planning and organizing work;
18. apply required methods and sequences when performing tasks;
19. practice principles of time management and work simplification when performing assigned tasks;
20. identify several types of career opportunities in meat processing; and
21. describe the requirements of various careers in meat processing.

Topic A-2: Allocating Resources in Meat Processing

Suggested Hours of Instruction: 2

PD-D-2

Reference(s): 8000

Topic Goal:

The student shall be provided the opportunity to discuss factors involved in evaluating and allocating resources and to demonstrate the consideration of these factors in completing tasks.

Topic Objectives:

After completing the topic, the student shall be able to:

1. select relevant goal-related activities and rank them in order of importance;
2. allocate time to activities;
3. know, prepare, and follow schedules;
4. prepare and use budgets including making cost and revenue forecasts;
5. maintain detailed records and track budget performance for analysis and adjustment when appropriate;
6. acquire, store, and distribute goods and resources to make best use of them;
7. assess knowledge and skills and distribute work load accordingly; and
8. evaluate performance and provide feedback.

Topic A-3: Using Various Information Processing Procedures in Meat Processing

Suggested Hours of Instruction: 2

PD-D-2

Reference(s): 8000

Topic Goal:

The student shall be provided the opportunity to demonstrate knowledge and skills in using various technologies to obtain, process, and distribute information.

Topic Objectives:

After completing the topic, the student shall be able to:

1. identify need for data, obtain it from existing sources, or create it and evaluate its relevance and accuracy;
2. organize, process, and maintain written or computerized records and other forms of information in a systematic fashion;
3. select and analyze information and communicate the results to others using oral, written, graphic, pictorial, or multi-media methods in industry-appropriate terminology;
4. employ computers to acquire, organize, analyze, and communicate information; and
5. utilize appropriate mathematical operations.

Topic A-4: Improving Interpersonal Relations in Meat Processing

Suggested Hours of Instruction: 2

PD-D-2

Reference(s): 8000

Topic Goal:

The student shall be provided the opportunity to recognize interpersonal skills required of co-workers and to demonstrate the use of those skills in the learning environment.

Topic Objectives:

After completing the topic, the student shall be able to:

1. work cooperatively with others and contribute to the group with ideas, suggestions, and effort;
2. work and communicate with clients/customers to satisfy their expectations;
3. communicate thoughts, feelings, facts, and ideas to justify a position and encourage, persuade, convince, or otherwise motivate individuals and groups including responsibly challenging existing procedures, policies, and authority;
4. negotiate an agreement that may involve exchanging specific resources or resolving divergent interests; and
5. recognize concepts related to cultural diversity, and work well with others regardless of their age and ethnic, social, or educational backgrounds.

Topic A-5: Promoting Social, Organizational, and Technological Systems in Meat Processing

Suggested Hours of Instruction: 2

PD-D-2

Reference(s): 8000

Topic Goal:

The student shall be provided the opportunity to discuss the interaction and function of social, organizational, and technological systems.

Topic Objectives:

After completing the topic, the student shall be able to:

1. distinguish trends, predict impact of actions on system operations, diagnose deviations in the function of the system/organization, and take necessary action to improve performance;
2. make suggestions to modify existing system(s) to improve products or services; and
3. develop new or alternative systems.

Topic A-6: Selecting and Applying Technology in Meat Processing

Suggested Hours of Instruction: 2

PD-D-2

Reference(s): 8000

Topic Goal:

The student shall be provided the opportunity to select and use new and emerging technologies.

Topic Objectives:

After completing the topic, the student shall be able to:

1. determine procedures, tools, machines (including computers and their programs), and other technologies that will produce the desired results;
2. apply the proper procedures for setting up and operating appropriate technologies;
3. examine the benefits of adopting new technology in agricultural applications; and
4. prevent, identify, and solve problems in using machines, computers, and other technologies.

Topic A-7: Demonstrating Personal and Occupational Safety in the Meat Processing Workplace

Suggested Hours of Instruction: 2

PD-D-2; AB-A-2

Reference(s): 8000

Topic Goal:

The student shall be provided the opportunity to demonstrate knowledge and skills of applicable safety policies and procedures.

Topic Objectives:

After completing the topic, the student shall be able to:

1. locate sources of information regarding relevant safety policies and regulations;
2. identify proper safety procedures; and
3. apply safe working practices to all training/working situations.

Topic A-8: Planning and Managing Supervised Agricultural Experience Programs

Suggested Hours of Instruction: 4

PD-B-2,3

Reference(s): 8000, 8502, 8002C, 8002D, SAEP-E

Topic Goal:

The student shall be provided the opportunity to plan and manage supervised agricultural experience programs.

Topic Objectives:

After completing the topic, the student shall be able to:

1. identify types of supervised agricultural experience activities;
2. describe characteristics of successful supervised agricultural experience programs;
3. select, plan, and conduct supervised agricultural experience activities; and
4. prepare and maintain accurate management and accounting records.

**UNIT B: RECOGNITION OF THE RELATIONSHIP OF THE MEAT INDUSTRY
IN THE FREE ENTERPRISE SYSTEM**

Topic B-1: Identifying Business Opportunities within the Meat Industry

Suggested Hours of Instruction: 2

AP-E-1

Reference(s): 8552-A

Topic Goal:

The student shall be given the opportunity to identify keys to success within each segment in the meat industry.

Topic Objectives:

After completing the topic, the student shall be able to:

1. classify each segment of the meat industry: input, production, processing, wholesale/retail, or service oriented industry;
2. identify the role and interrelationship of each segment of the meat industry;
3. recognize potential areas of interest with regards to the entrepreneurship for each segment of the meat industry;
4. list reasons for success or failure in the meat industry: cash flow, inventory management, strategic planning, location, marketing, management, market research, legal, product pricing, government, etc.; and
5. determine the effects that market research can have on the decision to enter a field and start a new business.

Topic B-2: Identifying Government Concerns When Establishing a Business in the Meat Industry

Suggested Hours of Instruction: 2

AP-E-1

Reference(s): 8552-B

Topic Goal:

The student shall be given the opportunity to identify government concerns when establishing a business in the meat industry.

Topic Objectives:

After completing the topic, the student shall be able to:

1. identify the divisions of the federal and state government related to starting a new business;
2. discuss legal documentation associated with agribusiness;
3. identify issues surrounding taxation and government regulations;
4. recognize the importance of legal documents affecting the business; and
5. discuss special issues facing the meat processing industry.

UNIT C: EXPLANATION OF THE TRENDS IN THE CONSUMPTION OF MEAT PRODUCTS

Topic C-1: Analyzing the History and Future Trends of the Meat Industry

Suggested Hours of Instruction: 3

AB-A-2,4

Reference(s): 8553-A, 8409

Topic Goal:

The student shall be given the opportunity to analyze trends of the meat industry.

Topic Objectives:

After completing the topic, the student shall be able to:

1. identify world food consumption patterns for meat products;
2. explain global politics and their impact on supply and demand for meat products;
3. discuss world meat production: beef, pork, lamb, poultry, fish and game;
4. recognize seasonal effects on availability and consumption of beef, pork, lamb, poultry, fish, and game products; and
5. discuss marketing cycles of meat/meat products.

Topic C-2: Recognizing Why the Consumer is “Boss”

Suggested Hours of Instruction: 3

AB-A-2,4

Reference(s): 8553-B

Topic Goal:

The student shall be given the opportunity to understand why the consumer is “boss”.

Topic Objectives:

After completing the topic, the student shall be able to:

1. explain why the consumer is boss: cultural, legal, product, profitability, and consumer service;
2. recognize nutritive value of meat as it relates to customer needs; and
3. explain how food safety affects consumer loyalty.

UNIT D: DEMONSTRATION OF WORK ETHICS, CUSTOMER RELATION SKILLS, AND MANAGEMENT COMPETENCIES CONSISTENT WITH INDUSTRY EXPECTATIONS

Topic D-1: Developing Work-Related Ethics

Suggested Hours of Instruction: 2
AB-D-2; AB-E-1
Reference(s): 8739-C

Topic Goal:

The student shall be given the opportunity to practice work-related ethics.

Topic Objectives:

After completing the topic, the student shall be able to:

1. discuss workplace ethics for meat industry employees; and
2. appreciate efficient use of time, material, company loyalty, and responsibility.

Topic D-2: Formulating Professional and Ethical Work Habits

Suggested Hours of Instruction: 2
AB-D-2; AB-E-1
Reference(s): 8739-B, 8740-E, 8736-C

Topic Goal:

The student shall be given the opportunity to determine professional and ethical work habits.

Topic Objectives:

After completing the topic, the student shall be able to:

1. describe work ethic etiquette: safety, proper communication, internet, team work, company handbook, e-mail, harassment, language, etc.;
2. define a "world class" work ethic;
3. recognize successful interpersonal relations in the workplace;
4. describe his/her work ethic;
5. evaluate how one can improve his/her work ethic;
6. describe his/her positive customer service skills; and
7. evaluate how one can improve his/her customer service skills.

Topic D-3: Establishing Favorable Relations with Customers

Suggested Hours of Instruction: 2
AB-D-2; AB-E-1
Reference(s): 8554-A

Topic Goal:

The student shall be given the opportunity to identify favorable relations with customers.

Topic Objectives:

After completing the topic, the student shall be able to:

1. define customer service;
2. identify the basic knowledge and skills required of a competent customer service representative for the meat industry; and
3. describe appropriate customer interaction.

UNIT E: RECOGNITION OF PROCEDURES RELATED TO SAFE MANUFACTURE OF FOODS THROUGH HYGIENIC FOOD HANDLING AND PROCESSING

Topic E-1: Identifying Components of Good Manufacturing Practices (GMP)

Suggested Hours of Instruction: 3
AP-A-2; BT-E-1
Reference(s): 8555-B

Topic Goal:

The student shall be given the opportunity to identify components of GMP.

Topic Objectives:

After completing the topic, the student shall be able to:

1. examine proper sanitation procedures;
2. determine temperature settings for cooked and cold products;
3. identify ways to prevent cross contamination;
4. recognize the importance of personal hygiene; and
5. discuss specifications for raw products.

Topic E-2: Preventing Food Borne Illness

Suggested Hours of Instruction: 2
AP-A-2; BT-E-1
Reference(s): 8555-A

Topic Goal:

The student shall be given the opportunity to demonstrate procedural practices to prevent food borne illness.

Topic Objectives:

After completing the topic, the student shall be able to:

1. discuss microbiology in a food preparation environment;
2. define food borne illness;
3. determine the causes of food borne illness;
4. identify sources of contamination;
5. discuss prevention and control of food borne illness;
6. recognize the importance of personal hygiene; and
7. evaluate consumer safe handling procedures.

Topic E-3: Control of Insects and Rodents in the Food Industry

Suggested Hours of Instruction: 1

AP-A-1

Reference(s): 8655-B

Topic Goal:

The student shall be provided the opportunity to recognize basic methods of insect and rodent control.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. describe life cycles and habitats of insects;
2. identify methods of controlling flying and non-flying insects; and
3. identify methods of controlling rodents.

Topic E-4: Preparing Livestock Carcasses for Market

Suggested Hours of Instruction: 1

AP-A-2

Reference(s): 8656

Topic Goal:

The student shall be provided the opportunity to recognize processing procedures for livestock carcasses.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. explain methods of handling livestock at the processing plant;
2. identify methods of stunning livestock before slaughtering;
3. explain slaughtering procedures for beef, pork, and lamb; and
4. describe procedures for scalding, skinning, and eviscerating carcasses.

UNIT F: RECOGNITION OF FOOD SAFETY LAWS THAT AFFECT THE MEAT INDUSTRY

Topic F-1: Identifying Government Agencies and Regulations Involved in the Meat Industry

Suggested Hours of Instruction: 1

AP-A-1

Reference(s): 8556-A

Topic Goal:

The student shall be given the opportunity to study and discuss the effects of government policies on the meat industry.

Topic Objectives:

After completing the topic, the student shall be able to:

1. discuss various government agency roles as they pertain to the inspection and grading of meat animals, meat, and meat products: FDA, USDA, FSIS, EPA, and federal, state and local health agencies;
2. explain legal liabilities;
3. identify adulterated products and its ramifications; and
4. discuss animal loss factors.

Topic F-2: Recognizing the Use and Purpose of Different Inspections

Suggested Hours of Instruction: 2

AP-A-1

Reference(s): 8655-A, 8655-B, 8657

Topic Goal:

The student shall be given the opportunity to study and discuss the use and purpose of different inspections.

Topic Objectives:

After completing the topic, the student shall be able to:

1. discuss the responsibilities of plant management personnel and inspection; and
2. identify the purpose of inspection.

Topic F-3: Inspection Standards for the Food Industry

Suggested Hours of Instruction: 2

AP-A-1

Reference(s): 8655-A

Topic Goal:

The student shall be provided the opportunity to examine federal and state inspection standards and public health regulations.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. name the primary food laws and their objectives;
2. list examples of the Good Manufacturing Practices;
3. describe an adulterated food; and
4. identify assistance given by the Public Health Service to the food industry and consumers.

UNIT G: RECOGNITION OF FACILITY AND EQUIPMENT MAINTENANCE AND SANITATION PROCEDURES

Topic G-1: Identifying Sanitation Standard Operating Procedures (SSOPs)

Suggested Hours of Instruction: 2

BT-E-1

Reference(s): 8557-A, 8655-C

Topic Goal:

The student shall be given the opportunity to identify with SSOPs.

Topic Objectives:

After completing the topic, the student shall be able to:

1. list proper steps of sanitation;
2. analyze ways to prevent pathogenic bacteria contamination;
3. recognize the importance of cleaning frequently;
4. discuss ways to prevent direct contamination;
5. recognize ways to prevent cross contamination;
6. determine corrective action when product contamination occurs; and
7. demonstrate documentation procedures.

Topic G-2: Developing a Sanitation Schedule**Suggested Hours of Instruction: 2****BT-E-1****Reference(s): 8557-B****Topic Goal:**

The student shall be given the opportunity to develop a sanitation schedule.

Topic Objectives:

After completing the topic, the student shall be able to:

1. write a SSOP;
2. explain preoperational and operational sanitation inspection; and
3. demonstrate good documentation of SSOPs.

Topic G-3: Recognizing Requirements for Food Processing Facilities**Suggested Hours of Instruction: 2****BT-E-1; AP-A-1****Reference(s): 8557-C****Topic Goal:**

The student shall be given the opportunity to identify the requirements for food processing facilities.

Topic Objectives:

After completing the topic, the student shall be able to:

1. plan facility designs;
2. determine types of structures that are most cost-effective;
3. assess safety features in facility designs;
4. analyze environmental issues when planning facilities;
5. evaluate proper plant waste management;
6. assess proper pest and rodent management; and
7. identify proper FDA approved pesticides.

Topic G-4: Chemicals for Sanitation in the Food Industry**Suggested Hours of Instruction: 1****AP-A-1****Reference(s): 8655-C****Topic Goal:**

The student shall be provided the opportunity to recognize chemicals used for sanitation in the food industry.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. identify characteristics of debris and soil;
2. describe functions of cleaning compounds;
3. discuss practices for safe use of cleaners; and
4. identify types and functions of sanitizers.

UNIT H: DESCRIPTION OF HAZARD ANALYSIS - CRITICAL CONTROL POINT IMPLEMENTATION

Topic H-1: Identifying the Main Principles of a HACCP System

Suggested Hours of Instruction: 3

BT-E-1

Reference(s): 8558-A

Topic Goal:

The student shall be given the opportunity to study and identify the main principles of HACCP.

Topic Objectives:

After completing the topic, the student shall be able to:

1. describe the seven points of HACCP;
2. define food safety hazards;
3. explain critical control points;
4. identify procedures and standards for CCPs;
5. describe corrective actions; and
6. recognize effective record keeping systems.

Topic H-2: Managing a HACCP System

Suggested Hours of Instruction: 2

BT-E-1

Reference(s): 8558-B

Topic Goal:

The student shall be given the opportunity to manage a HACCP system.

Topic Objectives:

After completing the topic, the student shall be able to:

1. practice applying management procedures of a HACCP system; and
2. explain proper recall procedures.

UNIT I: EXPLANATION OF FACTORS THAT AFFECT MEAT PALATABILITY

Topic I-1: Recognizing Meat Palatability

Suggested Hours of Instruction: 2

AB-C-2; BT-D-1,2,3

Reference(s): 8559-A

Topic Goal:

The student shall be given the opportunity to explain meat palatability.

Topic Objectives:

After completing the topic, the student shall be able to:

1. recognize factors that affect and predict meat palatability;
2. identify how meat cookery methods affect tenderness;
3. recognize methods of postmortem handling that affect palatability; and
4. practice cutting procedures that maximize tenderness.

Topic I-2: Recognizing Meat Cookery Methods

Suggested Hours of Instruction: 1
AB-C-2; BT-D-1,2,3
Reference(s): 8559-B

Topic Goal:

The student shall be given the opportunity recognize meat cookery methods.

Topic Objectives:

After completing the topic, the student shall be able to:

1. demonstrate dry heat methods of preparing meat;
2. discuss moist heat methods of preparing meat; and
3. identify different degrees of doneness and the effect on meat palatability.

UNIT J: IDENTIFICATION OF MUSCLES AND BONES

Topic J-1: Recognizing Muscle, Bone, and Fat

Suggested Hours of Instruction: 3
AP-A-2; PD-D-2
Reference(s): 8392, 8646-C, 8646-D

Topic Goal:

The student shall be given the opportunity to identify muscle, bone, and fat.

Topic Objectives:

After completing the topic, the student shall be able to:

1. identify the skeletal structures of beef, pork, lamb, chicken, fish, and game carcasses;
2. explain the development and growth of bone;
3. discuss muscle nomenclature;
4. identify locations of major muscles in primal, subprimal, and retail cuts; and
5. describe muscle, fat, and bone development in animals for human consumption.

UNIT K: ANALYZE METHODS OF INSPECTING AND GRADING MEATS

Topic K-1: USDA Inspection of Beef, Pork, and Lamb

Suggested Hours of Instruction: 1
AP-A-1; AP-D-1
Reference(s): 8657

Topic Goal:

The student shall be provided the opportunity to examine USDA inspection standards of beef, pork, and lamb.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. list steps involved in inspecting the carcass;
2. explain purpose of meat inspection; and
3. identify basic functions of federal meat inspection.

Topic K-2: Evaluating and Grading Carcasses and Wholesale Cuts

Suggested Hours of Instruction: 3

AP-A-2

Reference(s): 8820-A

Topic Goal:

The student shall be provided the opportunity to recognize evaluation and grading methods for carcasses and wholesale cuts.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. identify wholesale cuts of beef, pork, and lamb; and
2. discuss factors considered in the quality grading of beef, pork, and lamb carcasses.

UNIT L: IDENTIFY METHODS OF FABRICATING MEATS

Topic L-1: Wholesale and Retail Cuts of Beef, Pork, and Lamb

Suggested Hours of Instruction: 2

AP-A-2

Reference(s): 8010

Topic Goal:

The student shall be provided the opportunity to recognize wholesale and retail cuts of beef, pork, and lamb carcasses.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. identify wholesale and retail cuts of beef;
2. identify wholesale and retail cuts of pork; and
3. identify wholesale and retail cuts of lamb.

Topic L-2: Preparation of Processed Meats

Suggested Hours of Instruction: 3

AP-A-2

Reference(s): 8658

Topic Goal:

The student shall be provided the opportunity to examine preparation procedures for various processed meats.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. identify various types of sausages;
2. explain the purpose of processing meats; and
3. describe various methods of processing meat.

UNIT M: IDENTIFICATION OF THE METHODS OF PROCESSING BEEF

Topic M-1: Recognizing the Beef Harvesting Process

Suggested Hours of Instruction: 3
AP-A-2; PD-D-2

Reference(s): 8561-A, 8656, 8662

Topic Goal:

The student shall be given the opportunity to examine the beef harvesting process.

Topic Objectives:

After completing the topic, the student shall be able to:

1. identify factors involved in producing desirable market beef;
2. describe the process of harvesting beef;
3. explain the importance of by-products to the beef industry;
4. identify procedures for preparing kosher meats; and
5. recognize methods to enhance food safety and beef palatability during harvest.

Topic M-2: Evaluating Beef Carcasses

Suggested Hours of Instruction: 5
AS-B-1

Reference(s): 8561-B, 8010, 8820-A

Topic Goal:

The student shall be given the opportunity to determine evaluation methods for beef carcasses.

Topic Objectives:

After completing the topic, the student shall be able to:

1. discuss the USDA Beef Quality Grade Standards;
2. explain the USDA Beef Yield Grade Standards;
3. identify the wholesale cuts of a beef carcass; and
4. recognize dynamic price and value relationships related to beef carcass grading.

Topic M-3: Fabricating Beef Carcasses

Suggested Hours of Instruction: 5
AP-A-2; PD-D-2

Reference(s): 8561-C

Topic Goal:

The student shall be given the opportunity to describe beef carcass fabrication.

Topic Objectives:

After completing the topic, the student shall be able to:

1. fabricate a beef carcass;
2. describe fabrication of primal and subprimal cuts of beef;
3. discuss the Institutional Meat Purchase Specifications (IMPS); and
4. identify retail cuts by Uniform Retail Meat Identity Standards (URMIS).

Topic M-4: Identifying Value-Added Products of Beef

Suggested Hours of Instruction: 5

AB-D-2,4

Reference(s): 8561-D, 8658, 8661-A

Topic Goal:

The student shall be given the opportunity to recognize value-added products of beef.

Topic Objectives:

After completing the topic, the student shall be able to:

1. recognize procedures for manufacturing safe ground beef and related products;
2. identify pre-cooked meats;
3. discuss the value of marinating and tumbling beef cuts; and
4. name boneless value-added beef cuts.

UNIT N: IDENTIFICATION OF THE METHODS OF PROCESSING PORK

Topic N-1: Recognizing the Pork Harvesting Process

Suggested Hours of Instruction: 3

AP-A-2; PD-D-2

Reference(s): 8562-A, 8656, 8662

Topic Goal:

The student shall be given the opportunity to examine the pork harvesting process.

Topic Objectives:

After completing the topic, the student shall be able to:

1. identify factors involved in producing desirable fresh and smoked pork;
2. describe the process of harvesting pork;
3. explain the importance of by-products to the pork industry; and
4. name pork by-products sold by food stores.

Topic N-2: Evaluating Pork Carcasses

Suggested Hours of Instruction: 5

AS-B-1

Reference(s): 8562-B, 8010, 8820-A

Topic Goal:

The student shall be given the opportunity to determine evaluation methods for pork carcasses.

Topic Objectives:

After completing the topic, the student shall be able to:

1. discuss the USDA Pork Quality Grade Standards;
2. explain the USDA Pork Yield Grade Standards;
3. identify the wholesale cuts of a pork carcass; and
4. recognize dynamic price and value relationships related to pork carcass grading.

Topic N-3: Fabricating Pork Carcasses

Suggested Hours of Instruction: 5

AP-A-2; PD-D-2

Reference(s): 8562-C

Topic Goal:

The student shall be given the opportunity to describe pork carcass fabrication.

Topic Objectives:

After completing the topic, the student shall be able to:

1. practice pork carcass fabrication;
2. describe fabrication of primal and subprimal cuts of pork;
3. discuss the Institutional Meat Purchase Specifications (IMPS); and
4. identify retail cuts by Uniform Retail Meat Identity Standards (URMIS).

Topic N-4: Identifying Value-Added Products of Pork

Suggested Hours of Instruction: 5

AB-D-2,4

Reference(s): 8562-D, 8658, 8661-A

Topic Goal:

The student shall be given the opportunity to recognize value-added products of pork.

Topic Objectives:

After completing the topic, the student shall be able to:

1. identify procedures for manufacturing safe ground pork;
2. recognize procedures for manufacturing pre-cooked meats;
3. name boneless value-added pork cuts;
4. identify procedures for manufacturing fresh and cooked pork sausage; and
5. discuss factors used to enhance pork palatability.

Topic N-5: Curing Pork Products

Suggested Hours of Instruction: 1

AP-A-2; PD-D-2

Reference(s): 8562-E

Topic Goal:

The student shall be given the opportunity to discuss factors involved in curing pork products.

Topic Objectives:

After completing the topic, the student shall be able to:

1. identify types of cures;
2. explain the cure reaction;
3. discuss factors for curing and smoking pork products;
4. explain how curing affects food safety; and
5. develop batch production records, i.e.: curing, drying, cooking, etc.

**UNIT O: IDENTIFICATION OF THE METHODS OF PROCESSING
LAMB AND GOAT**

Topic O-1: Recognizing the Lamb and Goat Harvesting Process

Suggested Hours of Instruction: 3

AP-A-2; PD-D-2

Reference(s): 8563-A, 8656, 8662

Topic Goal:

The student shall be given the opportunity to examine the lamb and goat harvesting process.

Topic Objectives:

After completing the topic, the student shall be able to:

1. identify factors involved in producing desirable fresh lamb and goat products;
2. describe the process of harvesting lamb and goat;
3. explain the importance of by-products to the lamb and goat industry; and
4. name lamb and goat by-products sold by food stores.

Topic O-2: Evaluating Lamb and Goat Carcasses

Suggested Hours of Instruction: 5

AS-B-1

Reference(s): 8563-B, 8010, 8820-A

Topic Goal:

The student shall be given the opportunity to determine evaluation methods for lamb and goat carcasses.

Topic Objectives:

After completing the topic, the student shall be able to:

1. discuss the USDA Lamb Quality Grade Standards;
2. explain the USDA Lamb Yield Grade Standards;
3. identify the wholesale cuts of a lamb carcass;
4. recognize dynamic price and value relationships related to lamb carcass grading; and
5. identify goat carcass classification.

Topic O-3: Fabricating Lamb and Goat Carcasses

Suggested Hours of Instruction: 5

AP-A-2; PD-D-2

Reference(s): 8563-C

Topic Goal:

The student shall be given the opportunity to describe lamb and goat carcass fabrication.

Topic Objectives:

After completing the topic, the student shall be able to:

1. practice lamb and goat carcass fabrication;
2. describe fabrication of primal and subprimal cuts of lamb and goat;
3. discuss the Institutional Meat Purchase Specifications (IMPS); and
4. identify retail cuts by Uniform Retail Meat Identity Standards (URMIS).

Topic O-4: Identifying Value-Added Products of Lamb and Goat

Suggested Hours of Instruction: 3

AB-D-2,4

Reference(s): 8563-D, 8658, 8661-A

Topic Goal:

The student shall be given the opportunity to recognize value-added products of lamb and goat.

Topic Objectives:

After completing the topic, the student shall be able to:

1. discuss procedures for manufacturing ground lamb and goat; and
2. identify pre-cooked meats.

UNIT P: IDENTIFICATION OF THE METHODS OF PROCESSING GAME

Topic P-1: Recognizing the Game Harvesting and Fabrication Process

Suggested Hours of Instruction: 8

AP-A-2; PD-D-2

Reference(s): 8564-A

Topic Goal:

The student shall be given the opportunity to examine the process of harvesting and fabricating game.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. explain the process of harvesting deer;
2. describe fabrication of deer; and
3. identify by-products.

UNIT Q: IDENTIFICATION OF THE METHODS OF PROCESSING POULTRY

Topic Q-1: Recognizing the Poultry Harvesting Process

Suggested Hours of Instruction: 4

AP-A-2; PD-D-2

Reference(s): 8659-A

Topic Goal:

The student shall be given the opportunity to examine the process of slaughtering poultry.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. identify factors involved in producing desirable market poultry; and
2. describe the process for harvesting poultry.

Topic Q-2: Evaluating Poultry Carcasses

Suggested Hours of Instruction: 3

AS-B-1

Reference(s): 8644-B

Topic Goal:

The student shall be provided the opportunity to determine evaluation methods for poultry carcasses.

Topic Objectives:

1. identify standards of quality for poultry carcasses and carcass parts;
2. recognize the factors considered in grading carcasses; and
3. identify poultry carcass parts.

Topic Q-3: Identifying Retail Cuts and Value-Added Products of Poultry

Suggested Hours of Instruction: 4

AP-A-2; PD-D-2; AB-D-2,4

Reference(s): 8659-B, 8662

Topic Goal:

The student shall be provided the opportunity to recognize retail cuts and value-added products of poultry.

Topic Objectives:

1. explain the importance of by-products to the poultry meat processing industry;
2. name poultry by-products sold by food scores;
3. cut a chicken or turkey carcass into retail parts;
4. list two basic types of by-products produced in poultry meat processing; and
5. recognize the value of marinating poultry products.

UNIT R: IDENTIFICATION OF THE METHODS OF PROCESSING FISH

Topic R-1: Recognizing Classes and Qualities of Fish and Seafood

Suggested Hours of Instruction: 3

AP-A-2

Reference(s): 8660-A

Topic Goal:

The student shall be given the opportunity to determine classes and qualities of fish and seafood.

Topic Objectives:

After completing the topic, the student shall be able to:

1. recognize four types of fish;
2. discuss factors which contribute to the quality of fish for food;
3. describe indicators of poor fish quality; and
4. identify methods by which fish scientists classify foods.

Topic R-2: Preparing Fish for Food

Suggested Hours of Instruction: 2

AP-A-2

Reference(s): 8660-B

Topic Goal:

The student shall be given the opportunity to examine methods of preparing fish for food.

Topic Objectives:

After completing the topic, the student shall be able to:

1. identify methods used to maintain fish caught fresh at sea;
2. describe methods of processing catfish;
3. list the different market forms of finfish; and
4. discuss the role of the producer in processing fish.

Topic R-3: Processing Seafood and Fabricating Specialty Fish Products

Suggested Hours of Instruction: 3

AP-A-2

Reference(s): 8660-C

Topic Goal:

The student shall be given the opportunity to examine various processing methods of seafood and fabricated specialty fish.

Topic Objectives:

After completing the topic, the student shall be able to:

1. describe the process used to prepare seafood for cooking;
2. explain the importance of regulating fish waters in which oysters and clams are harvested;
3. name advantages and disadvantages of producing minced fish for food; and
4. discuss the contribution of surimi products to the food supply.

UNIT S: RECOGNITION OF PRINCIPLES OF MEAT PRESERVATION AND PACKAGING

Topic S-1: Packaging Red Meat, Poultry, Fish, Game, and By-Products

Suggested Hours of Instruction: 1

AP-A-2

Reference(s): 8661-B

Topic Goal:

The student shall be given the opportunity to examine methods of packaging meat products.

Topic Objectives:

After completing the topic, the student shall be able to:

1. identify the primary goal of a good packaging system;
2. list characteristics of a good packaging material;
3. identify proper label and application; and
4. practice proper packaging.

Topic S-2: Proper Storage Procedures For Red Meat, Poultry, Fish, Game, and By-Products

Suggested Hours of Instruction: 2

AP-A-2

Reference(s): 8661-A, 8520, 8661-C

Topic Goal:

The student shall be given the opportunity to examine methods of proper storage for meat products.

Topic Objectives:

After completing the topic, the student shall be able to:

1. describe the principle of freezing and the key rule in freezing;
2. list effective storage methods for a high-quality product; and
3. summarize and compare the optimum storage times for fresh and cured meat products.

Topic S-3: Identifying By-Products of the Meat Industry

Suggested Hours of Instruction: 2

AP-A-2

Reference(s): 8662

Topic Goal:

The student shall be provided the opportunity to examine the fabrication of edible by-products of livestock, poultry, and fish and to identify by-products of the meat industry.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. identify various by-products originating from animal carcasses; and
2. compare the value of animal by-products with the value of non-food products.

UNIT T: EXPLAIN THE PREPARATION OF EGGS FOR MARKET

Topic T-1: Handling and Storing of Eggs

Suggested Hours of Instruction: 1

AS-B-1; AS-C-1

Reference(s): 8663-A

Topic Goal:

The student shall be provided the opportunity to examine methods of handling and storing eggs.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. identify components of an egg's structure; and
2. recognize procedures essential to efficient egg production.

Topic T-2: Grading Eggs

Suggested Hours of Instruction: 2
AS-B-1; AS-C-1
Reference(s): 8663-B

Topic Goal:

The student shall be provided the opportunity to recognize USDA standards for grading exterior and interior qualities of shell and broken-out eggs.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. determine the USDA quality grade of an egg;
2. name factors which determine the USDA quality grade of an egg; and
3. explain the purpose for using official USDA grading standards for eggs.

Topic T-3: The Egg Marketing Process

Suggested Hours of Instruction: 1
AB-D-2,3
Reference(s): 8663-C

Topic Goal:

The student shall be provided the opportunity to examine methods of processing, packaging, and marketing eggs.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. identify methods involved in processing egg products;
2. describe functional properties of the egg;
3. recognize nutritive benefits of using egg products; and
4. discuss current issues in egg marketing.

UNIT U: RECOGNIZE THE PROCEDURES INVOLVED IN THE MARKETING OF FOOD PRODUCTS

Topic U-1: Purpose and Importance of Marketing

Suggested Hours of Instruction: 1
AB-D-4
Reference(s): 8714-A

Topic Goal:

The student shall be provided the opportunity to examine the role of the marketing process in domestic agriculture.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. define the marketing process;
2. identify the importance of marketing to agricultural producers;
3. discuss the importance of agricultural marketing to consumers; and
4. explain the purpose of marketing.

Topic U-2: Types of Agricultural Markets

Suggested Hours of Instruction: 1

AB-D-2

Reference(s): 8714-D

Topic Goal:

The student shall be provided the opportunity to examine various types of agricultural markets.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. describe the origin of marketing and the evolution of the current market system in agriculture;
2. discuss the organizational structure for agricultural marketing;
3. identify characteristics of various agricultural markets; and
4. recognize trends in marketing agricultural products.

Topic U-3: The Food Marketing Process

Suggested Hours of Instruction: 2

AB-D-2, 3

Reference(s): 8667-A

Topic Goal:

The student shall be provided the opportunity to examine procedures used for marketing food products.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. distinguish between wholesale and retail food products;
2. determine the agricultural producer's share of the economic value of a retail food item; and
3. identify various marketing channels used to get food to the consumer.

Topic U-4: Pricing, Labeling, and Displaying Food Products

Suggested Hours of Instruction: 1

AB-E-1

Reference(s): 8667-B

Topic Goal:

The student shall be provided the opportunity to examine methods of pricing, labeling, and displaying food products.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. list factors influencing the sale's price of a food product;
2. distinguish among types of pricing objectives;
3. explain the relationship between "mark-up" and "gross margin;"
4. discuss the influence of product labeling on consumer acceptance of food products; and
5. become familiar with displays used in food stores and supermarkets.

Topic U-5: Maintaining Stock and Quality Control of Food Products

Suggested Hours of Instruction: 1

AB-E-1

Reference(s): 8667-C

Topic Goal:

The student shall be provided the opportunity to determine methods of maintaining stock and quality control of food products.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. list methods for arranging an efficient food product storage room;
2. develop a solution to control or eliminate pilferage; and
3. explain the importance of rotating stocked food products.

Topic U-6: Convenience Foods in Consumer Preference

Suggested Hours of Instruction: 1

AB-D-4

Reference(s): 8667-D

Topic Goal:

The student shall be provided the opportunity to examine convenience foods and their role in consumer preference.

Topic Objectives:

After completing the topic(s), the student shall be able to:

1. discuss the nutritional impact for a society consuming high-convenience foods;
2. distinguish between convenience foods and non-convenience foods; and
3. identify various nutritious convenience foods meeting consumer demand.

REFERENCES AND SOURCES OF INFORMATION (for the Units of Instruction)

Instructional Materials Service
Texas A&M University
2588 TAMUS
College Station, TX 77843
Phone: (409) 845-6601
Fax: (409) 845-6608
e-mail: ims@tamu.edu
<http://www-ims.tamu.edu>

National Fisheries Institute
1901 North Fort Myer Drive
Suite 700
Arlington, VA 22209
Phone: (703) 524-8881
<http://www.nfi.org>

American Meat Science Assoc.
9140 Ward Parkway, Suite 200
Kansas City, MO 64114
Phone: (816) 444-3500
Fax: (816) 444-0330
<http://www.meatscience.org>

Department of Meat Science
Texas A&M University
348 Kleberg Center
College Station, TX 77843
<http://meat.tamu.edu>

Partnership for Food Safety
Education
<http://www.fightbac.org>

U.S. Department of Agriculture
Food Safety and Inspection Service
Room 2932-South Building
1400 Independence Ave. SW
Washington, DC 20250
Phone: (202) 720-7943
<http://www.fsis.usda.gov>

CEV Multimedia, Ltd.
PO Box 65266
Lubbock, TX 79464
Phone: (800) 922-9965
Fax: (800) 243-6398
e-mail: cev@cev-inc.com
<http://www.cev-inc.com>

National Pork Producers Council
PO Box 10383
Des Moines, IA 50306
Phone: (515) 223-2600
<http://www.nppc.org>

International HACCP Alliance
Texas A&M University
120 Rosenthal Center
College Station, TX 77843-2259
Phone: (409) 862-3643
Fax: (409) 862-3075
<http://ifse.tamu.edu/haccpall.html>

American Meat Institute
1700 North Moore Street
Suite 1600
Arlington, VA 22209
Phone: (703) 841-2400
Fax: (703) 527-0938
<http://www.meatami.org/index.htm>

Dr. Temple Grandin's Web Page
Livestock Behaviour, Design of
Facilities and Humane Slaughter
<http://www.grandin.com>

Department of Poultry Science
Texas A&M University
Kleberg Center, Rm. 101
College Station, TX 77843-2472
Phone: (409) 845-1931
Fax: (409) 845-1921
<http://gallus.tamu.edu>

National Cattlemen's Beef Assoc.
5420 South Quebec Street
Greenwood Village, CO 80111
Phone: (303) 694-0305
<http://www.beef.org>

Poultry Science Association, Inc.
1111 North Dunlap Avenue
Savoy, IL 61874
<http://www.psa.uiuc.edu>

Texas Department of Health
Meat Safety Assurance Division
1100 West 49th Street
Austin, TX 78756
Phone: (512) 719-0205
Fax: (512) 719-0240
<http://www.tdh.state.tx.us/bfds/msa/msahome.htm>

Texas Agricultural Extension Service
Agriculture Program
Texas A&M University
Room 112, Jack K. Williams
Administration Building
College Station, TX 77843-7101
<http://agextension.tamu.edu>

U.S. Department of Agriculture
National Agricultural
Statistics Service
<http://www.usda.gov/nass>

U.S. Department of Agriculture
Food Safety and Inspection Service
Food Safety Virtual University
<http://www.fsis.usda.gov/of/hrds/fsvu.html>

SUPPLEMENTAL MATERIAL AVAILABLE THROUGH IMS

BEEF, PORK, AND LAMB PROCESSING

REFERENCES

- 0226 NLMB MEAT EVALUATION HANDBOOK
- 0411 PRELIMINARY YIELD GRADE RULER
- 0423 MEATS CDE SCAN SHEET (pkg. of 10)
- 0428 FORM #7 MEAT IDENTIFICATION SCORE CARD (pkg. of 100)
- 4034 MEAT EVALUATION HANDBOOK
- 4038 LIVE ANIMAL CARCASS EVALUATION AND SELECTION MANUAL

VIDEOS

- 9505 PRACTICE RETAIL CUT IDENTIFICATION I (1989)
- 9506 PRACTICE RETAIL CUT IDENTIFICATION II (1989)
- 9941 PRACTICE RETAIL CUT IDENTIFICATION III (1993)
- 9942 PRACTICE RETAIL CUT IDENTIFICATION IV (1993)
- 9507 MEAT JUDGING PRACTICE I (1990)
- 9508 MEAT JUDGING PRACTICE II (1990)
- 9509 MEAT JUDGING PRACTICE III (1990)
- 9510 MEAT JUDGING PRACTICE IV (1990)
- 9943 MEAT JUDGING PRACTICE V (1993)
- 9591 PRACTICE MEAT JUDGING VI (1997)
- 9513 CARCASS JUDGING (1998)
- 9729 PRACTICE RETAIL CUTS JUDGING (1990)
- 9822 PRACTICE CARCASS JUDGING - I (1991)
- 9823 PRACTICE CARCASS JUDGING - II (1991)
- 9824 PRACTICE CARCASS JUDGING - III (1991)
- 9825 PRACTICE CARCASS JUDGING - IV (1991)
- 9614 MEAT JUDGING FUNDAMENTALS (1998)
- 9690 MEAT JUDGING: RETAIL CUT IDENTIFICATION UPDATE (1997)
- 9691 MEAT JUDGING CONTEST (1996)

SLIDES

- 5012 1987 MEAT EVALUATION HANDBOOK-NLMB
- 5014 1985 MEAT IDENTIFICATION -NLMB
- 5176 1993 MEATS JUDGING - WHOLESALE CUTS (40 SLIDES)
- 5177 1993 MEATS JUDGING - CARCASS PLACING I (65 SLIDES)
- 5178 1993 MEATS JUDGING - CARCASS PLACING II (60 SLIDES)
- 5179 1993 MEATS JUDGING - QUALITY AND YIELD GRADING (40 SLIDES)

BEEF PROCESSING

REFERENCES

- 0401 STANDARDS FOR GRADES OF SLAUGHTER CATTLE
- 0404 QUALITY GRADES OF SLAUGHTER STEERS
- 0405 YIELD GRADES OF SLAUGHTER STEERS
- 0406 STANDARDS FOR GRADES OF FEEDER CATTLE
- 0427 FORM #5 BEEF CARCASS GRADING (QUALITY/YIELD) SCORE CARD (pkg. of 100)

VIDEOS

- 9514 BEEF YIELD GRADING (1998)
- 9718 BEEF YIELD GRADING II (1998)
- 9515 PRACTICE BEEF YIELD GRADING (1990)
- 9517 BEEF QUALITY GRADING (1998)
- 9584 PRACTICE BEEF QUALITY GRADING I (1990)
- 9940 PRACTICE BEEF QUALITY GRADING II (1993)
- 9719 PRACTICE BEEF QUALITY GRADING III (1998)
- 9585 BEEF CUTS JUDGING (1991)
- 9721 EXCEL BEEF PACKING PLANT TOUR: SLAUGHTER (1997)
- 9722 EXCEL BEEF PACKING PLANT TOUR: FABRICATION (1997)
- 9726 PRACTICE BEEF CARCASS JUDGING (1991)
- 9731 PRACTICE BEEF WHOLESALE CUTS JUDGING I (1991)
- 9732 PRACTICE BEEF WHOLESALE CUTS JUDGING II (1991)
- 9756 BEEF SLAUGHTER AND DRESSING (1991)
- 9770 BEEF FOREQUARTER FABRICATION (1991)
- 9771 BEEF HINDQUARTER FABRICATION (1991)
- 9957 BEEF RETAIL CUTS IDENTIFICATION (1998)

PORK PROCESSING

REFERENCES

- 0401 STANDARDS FOR GRADES OF SLAUGHTER SWINE
- 0433 FORM #12 SWINE GRADING SCORE CARD (pkg. of 100)

VIDEOS

- 9512 PORK AND LAMB CUTS JUDGING
- 9727 PRACTICE PORK CARCASS JUDGING (1991)
- 9730 PRACTICE HAM AND LOIN JUDGING (1990)
- 9769 SWINE SLAUGHTER AND DRESSING (1991)
- 9772 PORK CARCASS FABRICATION (1991)
- 9958 PORK RETAIL CUTS IDENTIFICATION (1998)

LAMB PROCESSING

VIDEOS

- 9512 PORK AND LAMB CUTS JUDGING
- 9728 PRACTICE LAMB CARCASS JUDGING (1991)
- 9755 LAMB SLAUGHTER AND DRESSING (1991)
- 9773 LAMB CARCASS FABRICATION (1991)
- 9959 LAMB RETAIL CUTS IDENTIFICATION (1998)

GAME PROCESSING

VIDEO

- 9649 DEER PROCESSING (1998)

POULTRY PROCESSING

SLIDES

- 5035 1985 CHICKEN BROILER PROCESSING (103 SLIDES)
- 5121 1996 BREADED POULTRY MEAT PATTIES (TEXAS) (29 SLIDES)
- 5137 1987 WHOLE FRYER: USDA STANDARDS OF QUALITY FOR POULTRY
(41 SLIDES)
- 5138 1987 FRYER PARTS: USDA STANDARDS OF QUALITY FOR POULTRY PARTS
(66 SLIDES)

FISH PROCESSING

VIDEOS

- 9974 AQUACULTURE PROCESSING SAFETY AND QUALITY (1994)
- 9960 WARM WATER FINFISH: HARVESTING, HANDLING, TRANSPORT

SAFETY AND SANITATION

VIDEOS

- 9596 FOOD SAFETY AND SANITATION (1997)
- 9707 RED MEAT AND POULTRY SAFETY AND SANITATION (1997)