

CONTENT STANDARD 1.0: IDAHO ANIMAL AGRICULTURE INDUSTRY**Performance Standard 1.1: Animal Agriculture Industries**

- 1.1.1 Explain animal production in Idaho.
- 1.1.2 Compare and contrast animal production nationally and internationally.

Performance Standard 1.2: Beef Industry

- 1.2.1 Compare and contrast animal production nationally and internationally.
- 1.2.2 Determine the facility and equipment needs in beef production.
- 1.2.3 Compare and contrast types of beef production systems.
- 1.2.4 Compare and contrast grazing systems.
- 1.2.5 Explain land management practices and the importance of working relationships with land management agencies (Forest Service, BLM, etc.)

Performance Standard 1.3: Dairy Industry

- 1.3.1 Describe elements of dairy production.
- 1.3.2 Determine the facility and equipment needs in dairy production.
- 1.3.3 Compare and contrast types of dairy production systems.
- 1.3.4 Compare and contrast milking systems.

Performance Standard 1.4: Other Food Animal Systems

- 1.4.1 Describe the elements of sheep and goat production.
- 1.4.2 Describe the elements of swine production.
- 1.4.3 Describe the elements of poultry production.
- 1.4.4 Describe the elements of aquaculture production.

Performance Standard 1.5: Equine Industry

- 1.5.1 Describe the elements of the equine industry.

Performance Standard 1.6: Career Opportunities

- 1.6.1 Research career opportunities in livestock production, please and service animals and animal science.

CONTENT STANDARD 2.0: NUTRITIONAL REQUIREMENTS FOR LIVESTOCK**Performance Standard 2.1: Digestive Systems of Domestic Animals**

- 2.1.1 Compare and contrast ruminant and mono-gastric digestive systems.
- 2.1.2 Describe the characteristics and function of a ruminant system.
- 2.1.3 Describe the characteristics and function of cecum.
Describe the functions of the stomach and the purpose of enzymes present in the
- 2.1.4 stomach.
- 2.1.5 Describe the functions of each of the three segments of the small intestine.
- 2.1.6 Describe the functions of the large intestine.

Performance Standard 2.2: : Livestock Feedstuffs

- 2.2.1 Explain the functions of feed and how they supply nutrients to livestock.
- 2.2.2 Identify, compare and contrast the types of feedstuffs (roughages, concentrates, and supplements/additives).

- 2.2.3 Distinguish between good quality and poor quality feedstuffs, and examine how processing methods improve digestibility.
- 2.2.4 Examine storage and feeding practices of feedstuffs.

Performance Standard 2.3: Balanced Livestock Feed Rations

- 2.3.1 Identify the steps in balancing rations.
- 2.3.2 Discuss the importance of feed analysis.
- 2.3.3 Discuss how nutritional information is used in developing rations.
- 2.3.4 Develop balanced rations using the Pearson Square method.

CONTENT STANDARD 3.0: LIVESTOCK REPRODUCTIVE SYSTEMS**Performance Standard 3.1: Reproductive Systems of Domestic Animals**

- 3.1.1 Identify and describe the functions of the male and female reproductive structures.
- 3.1.2 Explain the phases of reproductive maturity in the life of an animal.
- 3.1.3 Identify and interpret the signs of estrus in relation to the reproductive cycle.

Performance Standard 3.2: Natural Animal Reproduction

- 3.2.1 Discuss the importance and explain the basics of animal reproduction.
- 3.2.2 Construct a diagram of estrogen and progesterone profiles during the estrous cycle.
- 3.2.3 Discuss the events that occur leading up to, during, and after parturition and describe the problems that may be encountered during parturition.

Performance Standard 3.3: Animal Reproduction Technology

- 3.3.1 Describe the process of artificial insemination in common agricultural animals, including the collection, evaluation, and handling of semen.
Discuss the advantages and disadvantages of artificial insemination and natural breeding.
- 3.3.2
- 3.3.3 Research the process of estrous synchronization, semen sexing, embryo transfer, cloning, and genetic engineering.

Performance Standard 3.4: Animal Reproduction Management

- 3.4.1 Identify common reproductive diseases that affect animals and determine appropriate prevention and treatment methods.
- 3.4.2 Discuss reproduction management practices and determine how they affect reproductive performance.

Performance Standard 3.5: Lactation

- 3.5.1 Discuss reproduction management practices and determine how they affect reproductive performance.
- 3.5.2 Describe the components of milk and colostrum and their role in newborn livestock.
- 3.5.3 Examine how factors such as genetics, disease, feed, environment, and body condition affect milk production.

CONTENT STANDARD 4.0: PRINCIPLES OF EVALUATION FOR ANIMAL SELECTION**Performance Standard 4.1: Genetics**

- 4.1.1 Understand genetics and the impact of Mendel's development of the basic principles of heredity.
- 4.1.2 Identify and describe heritable traits.

- 4.1.3 Explain the principles of dominance and incomplete dominance.

Performance Standard 4.2: Heritability of Traits

- 4.2.1 Analyze heritability estimates as a selection factor in breeding programs.
4.2.2 Explain the relationship between genotype, environment, and phenotype.
4.2.3 Discuss the advantages of crossbreeding and hybrid vigor in livestock production.

Performance Standard 4.3: Types and Conformation of Domestic Animals

- 4.3.1 Classify body condition scoring system among the different species.
4.3.2 Interpret performance data when evaluating livestock.
4.3.3 Classify animals and their characteristics based on phenotype.
4.3.4 Identify current industry standards for animal selection according to species.
4.3.5 Evaluate livestock using Expected Progeny Differences (EPD).

CONTENT STANDARD 5.0: ANIMAL WELFARE, HANDLING, AND QUALITY ASSURANCE

Performance Standard 5.1: Animal Welfare Philosophies

- 5.1.1 Compare and contrast animal welfare versus the concept of animal rights.
5.1.2 Research and report the basis for general concerns regarding animal welfare.

Performance Standard 5.2: Animal Behavior

- 5.2.1 Define, compare, and contract the patterns of animal behavior.
5.2.2 Describe various methods of animal behavior modification.

Performance Standard 5.3: Cultural and Controversial Issues Related to Animal Use and Keep

- 5.3.1 Compare and contrast current controversial issues in animal usage.
Distinguish between fact and propaganda when analyzing animal usage issues and their impact on the environment.
5.3.2
5.3.3 Compare and contrast cultural differences and their impact on animal use.
5.3.4 Examine legislation regarding current animal usage and welfare.

Performance Standard 5.4: Quality Assurance Standards

- 5.4.1 Research quality assurance standards for Idaho's livestock industry.
5.4.2 Explain how these standards would apply to the livestock industry.

CONTENT STANDARD 6.0: EVALUATING ANIMAL HEALTH AND ADMINISTERING CARE

Performance Standards 6.1.: Animal Disease Transmission and Immunity

- 6.1.1 Describe the modes of transmission of infectious diseases.
6.1.2 Examine the primary and secondary defenses the body uses to resist disease.
6.1.3 Identify how passive and active immunity can be enhanced by management.

Performance Standards 6.2: Animal Medications

- 6.2.1 Examine the use of vaccines in disease control.
6.2.2 Examine the types and forms of pharmaceuticals.
6.2.3 Compare appropriate storage methods for medications and recognize how improper

storage conditions may affect drugs.

Performance Standards 6.3: Medication and Care

- 6.3.1 Illustrate methods used to administer vaccines and pharmaceuticals.
- 6.3.2 Identify the instruments used to administer vaccines and pharmaceuticals.
- 6.3.3 Describe the types of injections, and determine the appropriate injection sites and dosages.
- 6.3.4 Examine the components of a label found on animal medication and interpret a veterinarian's prescription.

Performance Standards 6.4: Parasites

- 6.4.1 Identify common internal and external parasites that affect livestock and describe the diseases that they may spread or cause.
- 6.4.2 Understand the life cycle of common parasites and how it affects animals.
- 6.4.3 Recognize the importance of controlling parasites in disease management.

Performance Standards 6.5: Disease Control and Management

- 6.5.1 Explain how cleanliness affects disease control, and compare antiseptics and disinfectants.
- 6.5.2 Evaluate vaccination and prevention methods, and describe the types of vaccines available.

Performance Standards 6.6: Animal Health

- 6.6.1 Interpret animal behavior as related to health.
- 6.6.2 Discuss beneficial record-keeping programs.
- 6.6.3 Describe ways of identifying and tracking individual animals.

CONTENT STANDARD 7.0: EXPLORE HARVESTING AND PROCESSING OF ANIMAL PRODUCTS

Performance Standard 7.1: Meat Animal Harvesting and Processing

- 7.1.1 Outline the major steps involved in the harvesting of animals.
- 7.1.2 Identify the wholesale and retail cuts of beef, pork, and lamb.
- 7.1.3 Identify the edible and inedible by-products of meat animals.
- 7.1.4 Identify meat processing methods.

Performance Standard 7.2: Meat Product Quality

- 7.2.1 Identify the wholesale and retail cuts of beef, pork and lamb.
- 7.2.2 Compare and contrast grading systems of beef, pork and lamb.
- 7.2.3 Calculate and explain dressing percentages.

Performance Standard 7.3: Dairy Product Processing

- 7.3.1 Identify dairy quality control standards and requirements.
- 7.3.2 Identify dairy processing methods.
- 7.3.3 List and explain the utility of economically important dairy products.

CONTENT STANDARD 8.0: EXAMINE AGRICULTURAL BUSINESS AND RISK MANAGEMENT**Performance Standard 8.1: Marketing Process**

- 8.1.1 Investigate value-added concepts of marketing.
- 8.1.2 Understand the concepts of utility to agricultural commodities.
- 8.1.3 Discuss current industry trends in agriculture marketing.

Performance Standard 8.2: Market and Sales Analysis

- 8.2.1 Research strength, weakness, opportunities and threats (SWOT) analysis.
- 8.2.2 Determine a product/client's status in current market.
- 8.2.3 Discuss the value of accurate product information.
- 8.2.4 Determine planning assumptions based on market analysis.
- 8.2.5 Research potential target markets for an agricultural enterprise or product.

Performance Standard 8.3: Marketing Plan Evaluations

- 8.3.1 Determine the importance of evaluation a marketing plan.
- 8.3.2 Calculate the financial return of a marketing plan.

Performance Standard 8.4: Financial Risk Management

- 8.4.1 Define risk management in agricultural enterprises.
- 8.4.2 Differentiate between operating and capital loans.
- 8.4.3 Understand the factors that affect the cost of credit and amortize a loan.
- 8.4.4 Discuss available government programs to reduce financial risk.
- 8.4.5 Determine how insurance can reduce financial risk.
- 8.4.6 Compare and contrast leasing and purchasing equipment and real property.

Performance Standard 8.5: Marketing in Risk Management

- 8.5.1 Discuss how cash markets can influence risk management decisions.
- 8.5.2 Research the role of futures in marketing decisions.
- 8.5.3 Compare and contrast hedging as a price risk management strategy.
- 8.5.4 Examine the role and impact of speculation in price risk management.

CONTENT STANDARD 9.0: CAREER OPPORTUNITIES IN ANIMAL SCIENCE**Performance Standard 9.1: Careers in Animal Science**

- 9.1.1 Research potential careers in animal science.
- 9.1.2 Demonstrate employability skills for a career in the animal science industry.
- 9.1.3 Research additional industry certifications available.

CONTENT STANDARD 10.0: LEADERSHIP TRAINING THROUGH AGRICULTURAL EDUCATION**Performance Standard 10.1: Effective Leadership and Participation in Leadership Training**

- 10.1.1 Expand leadership experience by participating in a chapter activity
- 10.1.2 Participate in a career development event at the local level or above
- 10.1.3 Exhibit leadership skills by demonstrating proper parliamentary procedure

10.1.4. Participate in a speech or presentation activity

Performance Standard 10.2: School and Community Awareness

10.2.1 Participate in a school improvement or community development project.

**CONTENT STANDARD 11.0: SUPERVISED AGRICULTURAL EXPERIENCE (SAE)
AND PREPARATION OF STUDENTS FOR A CAREER IN AGRICULTURE**

Performance Standard 11.1: Maintain a Supervised Agricultural Experience

11.1.1 Accurately maintain SAE record books.

11.1.2 Investigate the proficiency award areas related to SAE program area.

11.1.3 Actively pursue necessary steps to receive higher degrees in FFA.