Florida CTE

Agriculture, Food and Natural Resources: Animal Science and Services 3: Grades 9-12

Analyze feed rations, additives, and supplements and assess how they meet the nutritional needs of animals. The student will be able to: 10.0

1. **Compare and contrast common types of feedstuffs and the roles they play in the diets of animals.** 10.1
2. **Discuss the relative nutritional value of feedstuffs by evaluating their general quality and condition.** 10.2
3. **Select appropriate feedstuffs for animals based on factors such as economics, digestive system and nutritional needs.** 10.3
4. **Examine the importance of a balanced ration for animals based on the animal's growth stage (e.g., maintenance, newborn, gestation, lactation, etc.).** 10.4
5. **Appraise the adequacy of feed rations using data from the analysis of feedstuffs, animal requirements and performance.** 10.5
6. **Formulate animal feeds based on nutritional requirements, using feed ingredients for maximum nutrition and optimal economic production.** 10.6
7. **Examine the purpose, impact and mode of action of feed additives and growth promotions in animal production.** 10.7
8. **Compare and contrast methods that utilize feed additives and growth promotants with production practices that do not, (e.g., organic versus conventional production methods).** 10.8
9. **Make and defend decisions regarding whether to use feed additives and growth promotants after researching and considering scientific evidence, production system needs and goals, and input from industry professionals.** 10.9
10. **Analyze different feed labels and apply feed label regulations.** 10.10

Evaluate animals for breeding readiness and soundness. The student will be able to: 11.0

1. **Explain how age, size, life cycle, maturity level and health status affect the reproductive efficiency of male and female animals.** 11.1
2. **Assess and describe factors that lead to reproductive maturity.** 11.2

	3 Evaluate and select animals for reproductive readiness. 11.3
	4 Summarize the importance of efficient and economic reproduction in animals. 11.4
	5 Identify reproductive problems that occur in animals. 11.5
	6 Determine when to treat or cull animals with reproductive problems. 11.6
Explain the reproductive system and breeding of selected animals. The student will be able to: 12.0	1 Identify phenotypically superior breeding animals. 12.1
	2 Describe breeding techniques. 12.2
	3 Analyze the care needs for breeding stock in each stage of growth. 12.3
	4 Describe the proper care for newborn offspring. 12.4
Design programs to prevent animal diseases, parasites and other disorders and ensure animal welfare. The student will be able to: 13.0	1 Explain methods of determining animal health and disorders. 13.1
	2 Perform simple health-check evaluations on animals and practice basic emergency response procedures related to animals. 13.2
	3 Identify and describe common illnesses and disorders of animals based on symptoms and problems caused by wounds, diseases, parasites, and physiological disorders. 13.3
	4 Identify and summarize characteristics of causal agents and vectors of diseases and disorders in animals. 13.4
	5 Research and analyze data to evaluate preventive measures for controlling and limiting the spread of diseases, parasites, and disorders among animals. 13.5
	6 Design and implement a health maintenance and disease and disorder prevention plan for animals in their natural and/or confined environments. 13.6
	7 Explain the clinical significance of common considerations in veterinary treatments, such as aseptic techniques. 13.7
Apply basic principles of veterinary science to animal production. 14.0	1 Assess the safety and effectiveness of facilities and equipment used for surgical and nonsurgical veterinary treatments and procedures. 14.1
	2 Identify and describe surgical and nonsurgical treatments and procedures in animal health care objectives. 14.2
Analyze biosecurity measures utilized to protect the welfare of animals on a local, state, national, and global	1 Summarize the importance of biosecurity to the animal industry at multiple levels (e.g., local, state, national, global). 15.1

level. The student will be able to: 15.0	2 Analyze procedures at the local, state, and national levels to ensure biosecurity of the animal industry. 15.2
	3 Identify and describe zoonotic diseases including their historical significance and potential future implications. 15.3
	4 Analyze the health risk of different zoonotic diseases to humans and identify prevention methods. 15.4
	5 Research and evaluate the effectiveness of zoonotic disease prevention methods and procedures to identify those that are best suited to ensure public safety and animal welfare. 15.5
Demonstrate knowledge of preventive medicine and disease control. The student will be able to: 16.0	1 Describe procedures for prescribed oral medications. 16.1
	2 Describe the process for administering medications by injection. 16.2
	3 Describe the procedure for safe disposal of biologicals. 16.3
	4 Discuss the term immunology and active and passive immunity. 16.4
	5 Describe the process for fecal sample collection, slide preparation, and examination. 16.5
Select animals for specific purposes and maximum performance based on anatomy and physiology. The student will be able to: 17.0	1 Identify and summarize ways an animal's health can be affected by anatomical and physiological disorders. 17.1
	2 Compare and contrast desirable anatomical and physiological characteristics of animals within and between species. 17.2
	3 Evaluate and select animals to maximize performance based on anatomical and physiological characteristics that affect health, growth, and reproduction. 17.3
	4 Compare and contrast procedures to develop an animal to reach its highest performance potential with respect to its anatomical and physiological characteristics. 17.4
	5 Choose, implement and evaluate sustainable and efficient procedures (e.g., selection, housing, nutrition and management) to produce consistently high-quality animals that are well suited for their intended purposes. 17.5
	6 Evaluate and select products from animals based on industry standards. 17.6
Prepare, groom, exhibit, and market animals. The student will be able to: 18.0	1 Groom selected animals for exhibition. 18.1
	2 Train animals for show and/or exhibition. 18.2
	3 Demonstrate proper techniques for exhibiting and animals. 18.3

	4 Measure animal growth using a scale. 18.4
	5 Identify various marketing outlets. 18.5
	6 Describe methods of restraining, loading, handling, and transporting animals safely. 18.6
	7 Determine market grades of animals and animal products. 18.7
	8 Identify components of shipping and health certificates. 18.8
Maintain and analyze records. The student will be able to: 19.0	1 Maintain and analyze animal records. 19.1
	2 Discuss the legal requirements of maintaining animal health records and maintain and analyze animal health records. 19.2
	3 Maintain and analyze basic business records (inventory, depreciation, receipts, and expenses) using computer applications. 19.3
	4 Prepare and maintain Supervised Agricultural Experience (SAE) records. 19.4
Explain the components of the American business system. (sole proprietorship, partnership, corporation, limited liability company, cooperative). The student will be able to: 20.0	1 Describe the five basic ways American business is organized. 20.1
	2 Distinguish and identify between the characteristics of each method of doing business. 20.2
	3 Evaluate the advantages and disadvantages provided by each business method. 20.3
	4 Evaluate how cooperative principles and practices differentiate cooperatives from other businesses. 20.4
	5 Distinguish and identify between the three types of cooperative structures and their functions. (marketing, service, purchasing) 20.5