Oklahoma CTE

Animal Science (2014)

Adopted 2014

Livestock Safety	**a.** Discuss the dangers involved in working with animals. AS.06.01.01.A
	b. Outline safety procedures for working with animals by species. AS.06.01.01.B
	a. Explain the implications of animal welfare and animal rights for animal agriculture. AS.06.01.02.A
Animal Genetics and Selection	**a.** Identify basic characteristics of animal cells, tissues, organs and body systems. AS.02.02.01.A
	a. Diagram a typical animal cell and identify the organelles. AS.02.02.02.A
	a. Describe the basic functions of animal cells in growth and reproduction. AS.02.02.03.A
	b. Detail the processes of meiosis and mitosis in animal growth, development, health and reproduction. AS.02.02.03.B
	a. Explain genetic inheritance in agricultural animals. AS.05.03.01.A
	b. Explain the advantages of using genetically superior animals in the production of animals and animal products. AS.05.03.01.B
	a. Explain the use of quantitative breeding values (e.g. EPDs) in the selection of genetically superior breeding stock. AS.05.03.03.A
	b. Compare and contrast quantitative breeding value differences between genetically superior animals and animals of average genetic value. AS.05.03.03.B
Nutrition, Feeds and Additives	**a.** Compare and contrast common types of feedstuffs and the roles they play in the diets of animals. AS.04.01.01.A
	a. Explain the importance of a balanced ration for animals. AS.04.01.02.A
	b. Appraise the adequacy of feed rations using data from the analysis of feed stuffs, animal requirements and performance. AS.04.01.02.B
	Explain the purpose and benefits of feed additives and growth promotants in animal production. AS.04.02.01.A

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	b. Discuss how feed additives and growth promotants are administered and the precautions that should be taken. AS.04.02.01.B
Reproductive Anatomy and Fertility	**a.** Explain the male and female reproductive organs of the major animal species. AS.05.01.01.A
	b. Describe the functions of major organs in the male and female reproductive systems. AS.05.01.01.B
	a. Explain how age, size, life cycle, maturity level and health status affect the reproductive efficiency of male and female animals. AS.05.02.01.A
	a. Discuss the importance of efficient and economic reproduction in animals. AS.05.02.02.A
	a. Define natural and artificial breeding methods. AS.05.03.02.A
	b. Explain the processes of natural and artificial breeding methods. AS.05.03.02.B
	a. Explain the advantages of major reproductive management practices, including estrous synchronization, superovulation, flushing and embryo transfer. AS.05.03.04.A
	b. Explain the processes of major reproductive management practices, including estrous synchronization, superovulation, flushing and embryo transfer. AS.05.03.04.B
	a. Discuss the uses and advantages and disadvantages of natural breeding and artificial insemination. AS.05.03.05.A
	b. Explain the materials, methods and processes of artificial insemination. AS.05.03.05.B
	a. Explain the functions of hormones in animals. BS.03.02.01.A
Breeding Management	**a.** Define natural and artificial breeding methods. AS.05.03.02.A
	b. Explain the processes of natural and artificial breeding methods. AS.05.03.02.B
	a. Explain the use of quantitative breeding values (e.g. EPDs) in the selection of genetically superior breeding stock. AS.05.03.03.A
	a. Explain the advantages of major reproductive management practices, including estrous synchronization, superovulation, flushing and embryo transfer. AS.05.03.04.A
	b. Explain the processes of major reproductive management practices, including estrous synchronization, superovulation, flushing and embryo transfer. AS.05.03.04.B

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	a. Discuss the uses and advantages and disadvantages of natural breeding and artificial insemination. AS.05.03.05.A
	b. Explain the materials, methods and processes of artificial insemination. AS.05.03.05.B
Parturition and Newborn Care	**a.** Describe the functions of the animal body systems and system components. AS.02.02.06.A
	a. Explain the clinical significance of common consideration in veterinary treatments, such as aseptic techniques. AS.03.01.04.A
	a. Explain methods of determining animal health and disorders. AS.03.01.01.A
	a. Explain the functions of hormones in animals. BS.03.02.01.A
Livestock Health Fundamentals	**a.** Explain methods of determining animal health and disorders. AS.03.01.01.A
	b. Perform simple health-check evaluations on animals. AS.03.01.01.B
	a. Explain the implications of animal welfare and animal rights for animal agriculture. AS.06.01.02.A
	a. Identify facilities needed to house and produce each animal species safely and efficiently. AS.07.01.02.A
	b. Explain how modern equipment and handling facilities enhance the safe and economic production of animals. AS.07.01.02.B
Livestock Diseases and Parasites	**a.** Identify common diseases, parasites and physiological disorders that affect animals. AS.03.01.02.A
	b. Diagnose illnesses and disorders of animal based on symptoms and problems caused by diseases, parasites and physiological disorders. AS.03.01.02.B
	a. Explain characteristics of causative agents and vectors of diseases and disorders in animals. AS.03.01.03.A
	a. Identify and describe zoonotic diseases. AS.03.01.05.A
Vaccinations and Medications	**b.** Evaluate preventative measures for controlling and limiting the spread of diseases, parasites and disorders among animals. AS.03.01.03.B
Livestock Management Practices	**a.** Explain the clinical significance of common consideration in veterinary treatments, such as aseptic techniques. - dehorning - docking - castration - hoof trimming AS.03.01.04.A

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	a. Describe how animal identification systems can track an animal's location, nutrition requirements, production progress and changes in health. AS.06.02.02.A
Market Grades and Classes	a. Identify quality and yield grades of food products. FPP.04.01.01.A
	b. Discuss factors that affect quality and yield grades of food products. FPP.04.01.01.B
Livestock Marketing	a. Name and explain the impact of external economic factors on an AFNR business. ABS.05.01.02.A
	b. Recognize how changes in prices of inputs and/or outputs influence the financial statements of an AFNR business. ABS.05.01.02.B
	a. Investigate the meaning and methods of marketing in AFNR as related to agricultural commodities, products and services ant to agricultural goods in domestic and international markets. ABS.06.01.01.A
	a. Described functions in agricultural marketing. ABS.06.01.02.A