

Livestock and Poultry Production, Adopted 2024

Knowledge and skills. LPP

1 The student develops a supervised agricultural experience program. The student is expected to: LPP.1

- A plan, propose, conduct, document, and evaluate a supervised agricultural experience program as an experiential learning activity; and LPP.1A
 - B use appropriate record-keeping skills as they relate to the supervised agricultural experience program. LPP.1B
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2 The student develops leadership skills through participation in an agricultural youth organization. The student is expected to: LPP.2

- A participate in youth agricultural leadership opportunities; LPP.2A
 - B review and participate in a local program of activities; and LPP.2B
 - C create or update documentation of relevant agricultural experience such as community service, professional, or classroom experiences. LPP.2C
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3 The student analyzes the history, domestication, and selection of livestock and poultry. The student is expected to: LPP.3

- A research and describe the history, domestication, and evolution of livestock and poultry species; LPP.3A
 - B describe the impacts other industries such as entertainment, recreation and leisure, and exhibition of animals have on the livestock and poultry industry; and LPP.3B
 - C evaluate and select livestock and poultry breeds based on purpose and conformation. LPP.3C
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4 The student explains the anatomy and physiology of livestock and poultry species. The student is expected to: LPP.4

- A identify and explain the skeletal, muscular, respiratory, and circulatory systems of livestock and poultry; LPP.4A
 - B identify and interpret ranges for healthy livestock and poultry vital signs; and LPP.4B
 - C compare normal and abnormal behavior of livestock and poultry. LPP.4C
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5 The student determines nutritional requirements of livestock and poultry. The student is expected to: LPP.5

- A describe and compare the digestive systems of ruminant and non-ruminant animals; LPP.5A
 - B identify sources of nutrients and classes of feed for livestock and poultry; LPP.5B
 - C identify vitamins, minerals, and feed additives for livestock and poultry; LPP.5C
 - D formulate feed rations based on nutritional needs and economic factors for livestock and poultry; LPP.5D
 - E research and discuss feeding practices and feed quality issues for livestock and poultry; LPP.5E
 - F identify forage plants used for livestock grazing; and LPP.5F
 - G research and explain livestock and poultry grazing practices such as rotational grazing and deferred grazing. LPP.5G
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6 The student explains livestock and poultry genetics and reproduction. The student is expected to: LPP.6

- A describe and compare the reproductive systems of various livestock and poultry; LPP.6A
 - B identify and explain livestock and poultry breeding systems such as grading up, crossbreeding, line-breeding, and inbreeding; LPP.6B
 - C use Expected Progeny Differences (EPDs) to evaluate livestock production; LPP.6C
 - D research and explain current and emerging technologies in livestock and poultry reproduction such as cloning, embryo transfer, in vitro fertilization, and artificial insemination; LPP.6D
 - E use Punnett squares to predict phenotypes and genotypes of livestock offspring; and LPP.6E
 - F explain the relationship between body condition scores and reproductive efficiency for livestock and poultry. LPP.6F
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7 The student understands how livestock and poultry are affected by pests and diseases. The student is expected to: LPP.7

- A identify and describe how bacteria, fungi, viruses, genetics, and nutrition affect livestock and poultry health; LPP.7A
 - B identify signs, symptoms, and prevention of livestock and poultry diseases; LPP.7B
 - C identify parasites and explain the signs, symptoms, treatment, and prevention of livestock and poultry parasites; and LPP.7C
 - D calculate dosage and identify administration methods of livestock and poultry medications. LPP.7D
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8 The student analyzes the management skills needed for livestock and poultry production. The student is expected to: LPP.8

- A identify tools and equipment for safe handling and restraining of livestock and poultry and select the appropriate tools or equipment for such tasks and purposes; LPP.8A

- B** identify types and essential features of facilities for livestock and poultry such as housing, veterinary, and reproduction facilities; **LPP.8B**
 - C** evaluate and describe industry practices such as dehorning, castrating, docking, and vaccinating and sire, dam, and newborn care to maximize the efficiency of livestock and poultry; **LPP.8C**
 - D** explain and demonstrate methods of identifying ownership of livestock and poultry such as branding, ear tagging, ear notching, wing bands, and tattooing; and **LPP.8D**
 - E** explain the use of technology such as aircraft, robotics, and smart irrigation in modern livestock and poultry production. **LPP.8E**
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9 The student examines the interrelationship of the factors impacting livestock and poultry production operations. The student is expected to: **LPP.9**

- A** research and explain livestock and poultry biosecurity and waste management practices; **LPP.9A**
- B** create an effective financial management plan for a livestock and poultry production operation; **LPP.9B**
- C** analyze and discuss environmental regulations, governmental regulations, and animal welfare policies related to livestock and poultry production; **LPP.9C**
- D** analyze the United States Department of Agriculture (USDA) standards and guidelines for organic livestock and poultry production; **LPP.9D**
- E** analyze and describe the interrelationship between grain markets and the livestock and poultry industry; **LPP.9E**
- F** assess the impact of the United States livestock and poultry industry on world commodity markets; **LPP.9F**
- G** use charts, tables, data, or graphs to evaluate the efficiency of livestock and poultry production; and **LPP.9G**
- H** develop and present a livestock or poultry operation plan that includes health, reproduction, nutrition, and management practices necessary for maximum efficiency. **LPP.9H**