

Integrated Agricultural Science (2021-)

Implement production and management plans in Agricultural, Food and Natural Resources (AFNR) systems (e.g., broiler houses, dairy farms, grain production, greenhouses, turf grass management, feed yards.) [AFNR.HS.19.1](#)

- a** Compare and contrast methods to assure needs the needs of living organisms (e.g., nutritional, health, environmental, biosecurity) are met efficiently and economically. [AFNR.HS.19.1.A](#)
- b** Identify pest control strategies associated with integrated pest management and the importance of determining economic threshold. [AFNR.HS.19.1.B](#)
- c** Design structural (e.g., housing, equipment, handling, processing, storage) facilities for the major systems of agriculture that are effective and efficient. [AFNR.HS.19.1.C](#)
- d** Implement appropriate equipment and power systems in the agricultural industry. [AFNR.HS.19.1.D](#)
- e** Analyze practices used to maintain a safe product through production, harvest, processing, storage, and shipment to ensure products are safe for consumption. [AFNR.HS.19.1.E](#)
- f** Compare methods used to reduce the effects of rural and/or urban production on the environment. [AFNR.HS.19.1.F](#)
- g** Summarize the types, purposes, and characteristics of effective planning, risk management, marketing, record keeping, and documentation practices for AFNR systems. [AFNR.HS.19.1.G](#)
- h** Interpret the economic impact of the agriculture industry to the local community, state, nation, and world. [AFNR.HS.19.1.H](#)
- i** Assess the alignment of modern technologies used in production systems (e.g., precision agriculture, biotechnology, veterinary, housing) with USDA sustainable practices criteria. [AFNR.HS.19.1.I](#)

Develop reasoned solutions to agricultural issues, problems, and applications using data, science, research, and technology. (e.g., trade policy, climate change,

- a** Assess a variety of agricultural situations and devise ways to improve efficiency and value to production, processes, and/or procedures. [AFNR.HS.19.2.A](#)
- b** Investigate and determine the root cause of a problem. [AFNR.HS.19.2.B](#)

sustainability in agriculture, rural infrastructure, Farm bill, food safety, farm financial stress, agricultural labor reform, world hunger) [AFNR.HS.19.2](#)

- c** Create an implementation plan, considering prioritized solutions, to act on new ideas. [AFNR.HS.19.2.C](#)
 - d** Consider the economic, social, community, environmental, and personal impact of solutions. [AFNR.HS.19.2.D](#)
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Apply management skills to organize and guide decisions in the agricultural industry. [AFNR.HS.19.3](#)

- a** Utilize industry standards to manage physical, financial, and human resources. [AFNR.HS.19.3.A](#)
- b** Identify applicable local, state, federal, and international laws and regulations. [AFNR.HS.19.3.B](#)
- c** Develop business goals and purpose-guiding resource allocation and operation. [AFNR.HS.19.3.C](#)