

MODULE AGR3040: LIVESTOCK/POULTRY 2 (MANAGEMENT TECHNIQUES)

Level: Advanced

Theme: Technology and Applications

Prerequisite: AGR2040 Livestock/Poultry 1 (Materials & Processes)

Module Description: Students demonstrate the techniques used to manage production of livestock, poultry or other animal commodities, focusing attention on industry trends and opportunities, genetics and reproduction, rations and feeding, housing, animal handling and restraint, animal health and welfare, breeding operations and care for the young. Potential areas of specialization include the production of beef, dairy, poultry, swine, sheep, game, exotics and bees and/or the study of aquaculture.

Module Parameters: Access to livestock, poultry or specialty animals and to appropriate animal housing and fencing structures.

Off-campus learning can support the development of practical skills in animal production; consultation with a work site supervisor ensures that relevant safety considerations are addressed and that student learning meets or exceeds the learner expectations in this module.

See the *Off-campus Education Guide for Administrators, Counsellors and Teachers* (Alberta Education, 1995) for further information regarding off-campus learning.

Note: This module can be combined with other modules from the Agriculture strand and/or from the Career Transitions strand to provide opportunities for students to develop technical competencies within the Alberta Green Certificate Training Program (Alberta Agriculture, Food and Rural Development). Opportunities may also exist for the completion of practical components of this module through projects undertaken with local youth groups; e.g., 4-H Clubs. See Section H (Linkages/Transitions) of this guide for further information.

Supporting Module: CTR2210 Workplace Safety (Practices)

Because of the practical nature of this module, students need a general knowledge of accepted practices and potential hazards when performing tasks related to animal production. See Planning for Instruction in Section C for further information on student safety.

MODULE AGR3040: LIVESTOCK/POULTRY 2 (MANAGEMENT TECHNIQUES) (continued)

Concept	Specific Learner Expectations	Notes
<p>Industry Trends and Viability</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • research production and consumption patterns within Alberta, Canada and the global community • explain the impact of economic, environmental and social trends on production practices within the industry; e.g.: <ul style="list-style-type: none"> – international trade and global competition – trade liberalization – rural and urban populations – food safety and consumer confidence – consumer preferences – support for research and development – environmental stewardship and sustainable development • identify market factors that influence enterprise selection; e.g.: <ul style="list-style-type: none"> – market demands and trends – market size, location and access – market competition • compare financial opportunities related to animal production; e.g.: <ul style="list-style-type: none"> – fixed and variable costs – forecast of returns – risk factors – income stabilization programs • describe ways in which government regulations, policies and guidelines may influence production • describe land requirements, and the suitability of soil, water and climatic conditions to production operations • describe other needs relative to production activities; e.g.: <ul style="list-style-type: none"> – structures and equipment – labour – transportation • predict future production on the basis of current issues and trends. 	<p>Attend local farm fairs and exhibitions.</p> <p>Construct/interpret graphs indicating production/consumption patterns over a period of time.</p> <p>Consider the impacts of local, national and global trends on industry practices.</p> <p>Plan for individual/group research projects and presentations.</p> <p>Ask students to make predictions regarding future production practices and give reasons for their predictions.</p> <p>Identify input costs and potential profits for a production venture.</p> <p>Invite a rural development specialist to discuss enterprise selection.</p> <p>Identify determinants of regional commodity production.</p>

MODULE AGR3040: LIVESTOCK/POULTRY 2 (MANAGEMENT TECHNIQUES) (continued)

Concept	Specific Learner Expectations	Notes
<p>Genetics and Reproduction</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • research heredity principles and their application to animals that are raised; e.g.: <ul style="list-style-type: none"> – dominant and recessive traits – selection criteria and procedures – systems of breeding • apply knowledge of specific reproduction processes; e.g.: <ul style="list-style-type: none"> – estrous cycle – gestation period – natural service/artificial insemination – normal birth process – age criteria for breeding • research reproduction technologies and their application to animals that are raised; e.g.: <ul style="list-style-type: none"> – embryo transfer – gender selection • describe procedures used to manage the quality of animals within the industry; e.g.: <ul style="list-style-type: none"> – selection criteria and regulations – pedigrees and performance information – showing/judging systems and standards – registry and record systems. 	<p>Identify desirable traits of specific animals and related heredity principles.</p> <p>Invite a local veterinarian to explain selection and breeding systems.</p> <p>Access the Western Breeder’s A.I. truck.</p> <p>Discuss the importance of maintaining breeding records.</p> <p>Examine registration and transfer forms.</p> <p>Organize a judging competition on a specific animal breed.</p>
<p>Production Skills</p>	<ul style="list-style-type: none"> • perform basic animal production activities; e.g.: <ul style="list-style-type: none"> – feeding – housing – handling and restraint – health and welfare – breeding operations – caring for young • describe approved methods of marking or tagging animals for identification 	<p>Consider strategies for managing livestock from birth to market.</p> <p>Discuss growth and development patterns in relation to the age of an animal.</p> <p>Keep a daily log that details production activities.</p> <p>Research food sources and additives.</p> <p>Discuss animal stress in relation to animal confinement.</p> <p>Describe symptoms of common diseases.</p>

MODULE AGR3040: LIVESTOCK/POULTRY 2 (MANAGEMENT TECHNIQUES) (continued)

Concept	Specific Learner Expectations	Notes
Production Skills (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • identify and apply appropriate strategies for maintaining sustainable use of natural resources; e.g.: <ul style="list-style-type: none"> – management practices related to soil fertility and conservation – management practices related to water quality and the hydrologic cycle • explain concerns regarding animal management and sustainable production systems; e.g.: <ul style="list-style-type: none"> – biotechnology – food safety – animal rights – pollution • explain relevant legislation and policy through production management activities; e.g.: <ul style="list-style-type: none"> – environmental health and safety – personal health and safety. 	<p>Potential linkages exist with the Alberta Agriculture Green Certificate Farm Training Program:</p> <ul style="list-style-type: none"> • beef • dairy • sheep • swine. <p>For additional information, see Section H: Linkages/Transitions.</p> <p>Plan for individual research regarding relevant issues.</p> <p>Research criteria for the Outstanding Environmental Stewardship Award; invite local nominees.</p> <p>Research legal considerations related to animal housing.</p>