

MODULE AGR3050: AGRIFOODS 2 (STANDARDS & REGULATION)

Level: Advanced

Theme: Technology and Applications

Prerequisite: AGR2050 Agrifoods 1 (Materials & Processes)

Module Description: Students demonstrate knowledge of the techniques used to manage the development of an agrifood product or related service, focusing attention on government regulation and control, economic principles, product quality and safety, environmental impact and industry trends. Potential areas of investigation include dairy, beef, pork, poultry, cereals, oil seeds, sugar beets, wine, fruits/vegetables and honey.

Note: It is recommended that this module provide further investigation of the agrifood industry examined in AGR2050 Agrifoods 1.

Module Parameters: Access to an agrifoods industry.

Curriculum and Assessment Standards

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none">• identify government legislation and policies that regulate practices within an agrifood industry	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none">• given a specific agrifood industry, identifying and describing:<ul style="list-style-type: none">– the roles of federal, provincial and local government agencies responsible for product quality, worker safety and environmental impact within the industry– examples of government policy and/or legislation relevant to the industry that regulate:<ul style="list-style-type: none">• inspection of raw materials• product grading, packaging and labelling• sanitation standards• worker safety• environmental impact. <p><i>Assessment Tool</i> <i>Knowledge/Application Assessment: Government Policy and Legislation, AGR3050–1</i></p> <p><i>Standard</i> <i>Respond to a standard of 3 on the rating scale</i></p>	30

MODULE AGR3050: AGRIFOODS 2 (STANDARDS & REGULATION) (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> • describe techniques used to manage industry practices, including the application of economic principles, product quality and safety, and environmental impact • identify industry trends and opportunities for developing new agrifood products • demonstrate basic competencies. 	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> • preparing and presenting an oral, written and/or multi-media report describing specific management practices adopted by an agrifood industry to comply with government policy and regulation. <p><i>Assessment Tool</i> <i>Presentations/Reports: Management Practices in Agrifoods, AGR3050–2</i></p> <p><i>Standard</i> <i>Prepare and present the report to a standard of 3 on the rating scale</i></p>	<p>30</p>
	<ul style="list-style-type: none"> • completing a research project on trends and opportunities within an agrifood industry. Research to address: <ul style="list-style-type: none"> – production and consumption patterns within Alberta, Canada and the global community – factors that determine the viability of a specific agrifood industry – opportunities for product research and development within the industry. <p><i>Assessment Tool</i> <i>Research Process: Industry Trends in Agrifoods, AGR3050–3</i></p> <p><i>Standard</i> <i>Complete all components of research to a standard of 3 on the rating scale</i></p>	<p>40</p>
	<ul style="list-style-type: none"> • observations of individual effort and interpersonal interaction during the learning process. <p><i>Assessment Tool</i> <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>

MODULE AGR3050: AGRIFOODS 2 (STANDARDS & REGULATION) (continued)

Concept	Specific Learner Expectations	Notes
<p>Government Regulations</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • explain the role of government legislation in maintaining product quality and safety within an agrifood industry; e.g.: <ul style="list-style-type: none"> – inspection of raw materials – product grading – packaging and labelling – sanitation standards – safety regulations • describe the mandates of specific government agencies in maintaining product quality and safety; e.g.: <ul style="list-style-type: none"> – Agriculture Canada – Alberta Agriculture, Food and Rural Development – Consumer and Corporate Affairs – Health and Welfare Canada • describe potential applications of the International Standards Organization (ISO) in regulating industry practices • describe the mandates of specific government agencies regarding industry use of land, water and air; e.g.: <ul style="list-style-type: none"> – Alberta Environmental Protection – Environment Canada. 	<p>Discuss legal definitions and standards for the processed product.</p> <p>Investigate worker safety concerns and related legislation.</p>
<p>Management Functions</p>	<ul style="list-style-type: none"> • apply knowledge of basic economic principles to management decisions within the industry; e.g.: <ul style="list-style-type: none"> – supply and demand – law of diminishing returns – comparative advantage • identify criteria and techniques for assuring the quality of a commodity or value-added product through processing, transportation and storage; e.g.: <ul style="list-style-type: none"> – parameters of quality – inspection and grading – quality control systems 	<p>Discuss quality control on incoming product/ materials.</p> <p>Research applications of “Hazard Analysis at Critical Control Points” (HACCP).</p> <p>Identify grading and labelling requirements.</p> <p>For information on quality control in cheese production, view the video entitled <i>On the Line</i> (see Section I: Learning Resource Guide).</p>

MODULE AGR3050: AGRIFOODS 2 (STANDARDS & REGULATION) (continued)

Concept	Specific Learner Expectations	Notes
<p>Management Functions (continued)</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • identify criteria and techniques for managing environmental impact; e.g.: <ul style="list-style-type: none"> – methods of effluent disposal – water treatment after use – soil conservation practices – use of biodegradable materials • explain how relevant supply systems may influence industry management; e.g.: <ul style="list-style-type: none"> – supply of raw materials – production volumes – access to market • describe current issues regarding food quality and sustainable processing systems; e.g.: <ul style="list-style-type: none"> – food additives, preservatives and irradiation – use of organic and inorganic materials – effluent disposal and pollution. 	<p>Research impacts of:</p> <ul style="list-style-type: none"> • milk board system • pork marketing board • egg/poultry marketing boards • Canadian Wheat Board • Honey Producers Cooperative. <p>Plan for individual research regarding relevant issues.</p>
<p>Industry Trends</p>	<ul style="list-style-type: none"> • describe production and consumption patterns within Alberta, Canada and the global community • describe the impact of economic, environmental and social trends on 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 • describe opportunities for product research and development within the industry; e.g.: <ul style="list-style-type: none"> – altering existing products – developing new products – developing new markets • predict future production on the basis of current trends and issues. 	<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 predict future production techniques and products, giving reasons for their predictions.</p>