



**Saskatchewan
Learning**

**Pork Production 10, 20
Agriculture Technician Program
Curriculum Guide
A Practical and Applied Art**

**Saskatchewan Learning
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Program Overview

The Agriculture Technician (ATEC) Program develops students' knowledge, skills and abilities in six major areas of agricultural production. These six areas of production are:

- field crop and irrigated field crop
- cow/calf
- feedlot
- dairy
- sheep
- pork.*

* Initially, pork will be developed as an ATEC program but may eventually be elevated to a designated trade.

The courses within each area of production are organized into three levels of knowledge, skills and abilities: introductory, intermediate, and advanced.

Introductory level modules (Level 10) help students gain knowledge, and build the skills and abilities that are used in the day to day operation of the particular production sector. These modules form the basis for further learning. The range of experience and knowledge of students at the introductory level will range from very little, or none, to considerable. Those students with prior knowledge and experience should be assessed and given credit for the core modules as quickly as possible. Then use the optional modules to enhance students' knowledge, skills and abilities.

Intermediate level modules (Level 20) build on the competencies developed at the introductory level. These modules broaden or refine the knowledge, skills and abilities used in the particular production sector. Optional modules are used to enhance learning and address individual interests and learning needs. These modules also help students direct their learning toward related careers, job opportunities, and post-secondary education.

If articulation agreements are established, these courses could provide the desirable background and skills for farm employment or entry into related programs at public and vocational colleges, technical institutes, apprenticeship programs, and universities in Saskatchewan.

All of the courses have been prepared with the guidance of Saskatchewan Learning and follow the outline, format, and required dimensions of the Saskatchewan Learning Practical and Applied Arts curricula.

Philosophy and Rationale

Saskatchewan is a world leader in traditional primary production agriculture. Today, there is ever increasing and intense global competition for primary agriculture products. This means that Saskatchewan agricultural producers and employees need to have knowledge, skills and abilities in a variety of areas in order to maximize production and remain viable.

Providing students with practical knowledge, skills and abilities in pork production will help students make meaningful contributions to their family farming operations, or pursue related career and educational opportunities.

Aim and Goals

Aim

The aim of Pork Production: Agriculture Technician Program is to provide students with knowledge, skills and abilities in pork production including farm safety procedures, communication skills, and basic knowledge of machinery and equipment as well as the care and handling of all pigs.

Goals

Awareness: To provide students with an awareness of the nature of pork production including the knowledge, skills and abilities required for pork production.

Connections between School and Work: To create a connection for students between the world of school and the world of work.

Business and Entrepreneurship Attitudes: To develop the skills and abilities which encourage students to understand the business of pork production and markets.

Community Environment: To use relevant community examples which will help develop students' skills and abilities as well as encourage a sense of pride and community.

Communication: To develop social and communication skills as potential employees or employers in pork production.

Employability Skills: To encourage the development of employability skills in pork production.

Personal Management Skills: To promote self-esteem, confidence and a proactive attitude toward time management, communication skills, and technical skills.

Course Components and Considerations

Course Description

Pork Production 10, 20 requires 100 hours of instruction per credit. Each course has been developed to provide a balance among:

- *knowledge* of all facets of pork production including farm safety
- *skills and abilities* provided by information and practical application of concepts
- *exposure* to farms involved in pork production
- *opportunities* for mentoring, job shadowing, or work study using resources in the community.

The ATEC Program courses are organized into two sets of modules:

- **Pork Production 10, 20 Core Modules** represent 50-65 hours of in-class or practical instruction which will develop student knowledge, skills and abilities at the introductory level of pork production.

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- **Pork Production 10, 20 Optional Modules** are used to meet the particular interests of individual students. Students should be encouraged to develop learning contracts indicating their particular area of interest.

To successfully complete Pork Production 10, 20, a student must spend in the range of 25-50 hours of every 100 hours receiving practical instruction at a work site.

Training Plans

The Appendices contain training plans in the form of checklists. These training plans can be used by teachers or farmer-trainers for organizing, planning and monitoring work study or instruction at a work site. Student expectations include observation, assistance or demonstration of a skill or set of skills.

Adjusting for Prior Learning and Experience

Many students, particularly those coming from farm backgrounds, may have already acquired some of the basic knowledge and/or competencies in pork production prior to taking this program. Teachers should assess individual students and evaluate their level of competency. Teachers should apply the Adaptive Dimension (i.e., adapting course material, instruction or environment to support students in achieving objectives) to Core Modules and encourage students to select optional modules which will enhance their knowledge, skills and abilities in pork production.

Students should develop their own learning contracts according to their own needs. Each module has a suggested range of instructional hours allowing for flexibility in designing individual learning plans.

Course Overview

In the Pork Production 10, 20 series, there are no prerequisites for any of the courses. While it is recommended that students complete both courses in the series, a teacher may choose to teach 20 without teaching 10. In order to accommodate this option, few modules have prerequisite modules identified. However, when not providing the 10 and 20 courses in order, teachers must review, and may need to incorporate, learning objectives from earlier comparable modules to ensure that students gain all the necessary knowledge and skills.

Module Code	Module	Suggested Time
Core and Optional Modules for Pork Production 10		
PORK01	Module 1: Saskatchewan's Pork Industry (Core)	3-4 hours
PORK02	Module 2: Farm Safety (Core)	7-9 hours
PORK03	Module 3: Communications (Core)	3-4 hours
PORK04	Module 4: Career Exploration (Core)	3-4 hours
PORK05	Module 5: Planning for Pork Production (Core)	5-6 hours
PORK06	Module 6: Farm Equipment Maintenance and Repair (Core)	12-14 hours
PORK07	Module 7: Swine Anatomy and Physiology (Core)	4-5 hours
PORK08	Module 8: Basic Handling of Pork (Core)	3-4 hours
PORK09	Module 9: Pig Nutrition (Core)	4-5 hours
PORK10	Module 10: Feeding Equipment (Core)	6-8 hours
PORK11	Module 11: Pork Health Care (Optional)	5-7 hours
PORK12	Module 12: Swine Barn Routine (Optional)	5-7 hours
PORK13	Module 13: Swine Barn Watering Systems (Optional)	1-3 hours
PORK14	Module 14: Recordkeeping in a Pork Operation (Optional)	1-3 hours
PORK15A	Module 15A: Work Study Preparation and Follow-up Activities (Core)	5-10 hours
PORK16A	Module 16A: Work Study (Core)	25-50 hours
Core and Optional Modules for Pork Production 20		
PORK17	Module 17: Marketing Hogs in Saskatchewan (Core)	3-4 hours
PORK18	Module 18: Farm Safety (Core)	3-4 hours
PORK19	Module 19: Communications (Core)	3-4 hours
PORK20	Module 20: Career Exploration (Core)	3-4 hours
PORK21	Module 21: Planning for Pork Production (Core)	3-4 hours
PORK22	Module 22: Farm Equipment Maintenance and Repair (Core)	10-15 hours
PORK23	Module 23: Reproduction (Core)	5-8 hours
PORK24	Module 24: Feeds and Feeding Systems (Core)	5-8 hours
PORK25	Module 25: Sanitation Practices for Swine Production (Core)	5-8 hours
PORK26	Module 26: Waste Removal (Core)	5-7 hours
PORK27	Module 27: Feeding Equipment (Optional)	3-5 hours
PORK28	Module 28: Swine Barn Protocol (Optional)	3-5 hours
PORK29	Module 29: Veterinary Drugs (Core)	3-5 hours
PORK30	Module 30: Farrowing Procedures (Optional)	5-10 hours
PORK31	Module 31: Recordkeeping for a Pork Operation (Optional)	4-6 hours
PORK15B	Module 15B: Work Study Preparation and Follow-up Activities (Core)	5-10 hours
PORK16B	Module 16B: Work Study (Core)	25-50 hours

Considerations for Program Delivery

Community Partnerships Involve Using Local Farms and Farmers to Learn

Throughout this program, pork producers, livestock equipment and machinery dealers, and pork or livestock specialists are recommended as resource persons to enhance student learning and to provide practical experience. Students should also use related livestock production businesses and services such as:

- feed mills
- livestock auction markets
- producer organizations
- farm building contractors
- veterinarians
- short-line equipment manufacturers or machinery dealers.

Teachers will need to seek assistance from pork producers in the community in order to provide opportunities for practical experience and to use as resources as required. Adjustments should be made to accommodate the particular circumstances of the community as well as the related experiences of the students.

Work study opportunities are a requirement of the course (e.g., 25 to 50 hours per credit).

Instructional Resources

There are a wide variety of resources to support the instruction of pork production. Students should develop skills in finding and using the most current information on topics relating to pork production.

Saskatchewan Agriculture, Food and Rural Revitalization is the most important source of current resources. Resources can be ordered from the Publication Distribution Centre Order Desk by telephone at (306) 721-4330, by fax at (306) 721-4626 or by e-mail at Valb.pad@sk.sympatico.ca. Saskatchewan Agriculture, Food and Rural Revitalization's web site is <http://www.agr.gov.sk.ca>.

Instructional Strategies and Methods

Pork Production 10, 20 encourages the use of the following instructional strategies and methods. Consult Saskatchewan Learning's foundation document *Instructional Approaches: A Framework for Practice* (1991), for additional information. Many methods are recommended for use with the ATEC program.

experiential

- field trips
- field observations
- job shadowing.

interactive

- presentations including on-site demonstrations or symposiums
- discussions
- mentoring with co-operating farmers-trainers.

independent learning

- learning contracts
- student reference manuals.

Learning contracts and the creation of Student Reference Manuals are of particular importance in the ATEC Program.

Learning Contracts

Pork Production 10, 20 is designed for more individualized exploration, and application of skills and abilities through on-site practice with working farmers or on-site trainers. Learning contracts should be used to organize the on-site practice with the foundational and learning objectives required by the modules throughout the course. Examples of learning contracts can be found in Saskatchewan Learning's foundation document, *Student Evaluation: A Teacher Handbook* (1991).

Student Reference Manual

The purpose of the Student Reference Manual is to be a repository of useful, work-site reference material collected throughout the course and throughout the various levels. The Student Reference Manual provides an exhibit of a student's effort, progress, and achievement over a period of time. The manual should be organized so that it is clearly useful to the individual student.

Throughout each level, students are requested to prepare material to insert and maintain in the manual. The manual should be evaluated on accuracy, completeness, usefulness, organization and presentation of the material.

Preparing for Pork Production

The courses in the ATEC Program focus on the knowledge, skills and abilities required at the technician level of pork production. Students are expected to achieve the basic competencies outlined throughout the course by:

- engaging in hands-on, practical experiences with knowledgeable experts in pork production
- monitoring progress using training plans in the form of checklists throughout the program. Students should be informed of the training plans and work with the teacher and farmers-trainers to achieve the objectives.

The key factor to successful achievements of the basic competencies is the contribution made by the co-operating farmers-trainers. In order to establish a successful relationship, expectations should be discussed, defined and mutually agreed upon by the co-operating farmers-trainers and the teacher. Teachers should refer to the "Guidelines for Work Study", a section of the *Practical and Applied Arts Handbook* (2003), for specific direction.

Teachers should also prepare an inventory of other community resources, work study opportunities and field trip or demonstration sites prior to implementing Pork Production.

Planning Schedule for Teachers

Time period	To Do
Prior to course	Identify possible co-operating farmers-trainers* Review guidelines for Work Study Identify and select possible field trip or demonstration sites Identify possible work study opportunities.
Early in course	Work with students to: <ul style="list-style-type: none">• prepare individual learning contracts• identify and arrange field trip sites• identify and arrange work study opportunities
Mid-way	Have students review individual learning contracts Discuss student progress with co-operating farmers-trainers
End of course	Remind students of deadlines Prepare for final assessment

* This course does not fall within the set of courses aligned with Saskatchewan Agriculture, Food and Rural Revitalization's Green Certificate Program. Teachers may wish, however, to contact the program coordinator who may be able to assist with the identification of co-operating farmers-trainers as well as possible symposiums, field trips or demonstration sites.

Student Evaluation

There are three areas of importance in this curriculum on which teachers will collect data on student progress. Teachers should clearly outline their expectations of students and make students aware of the expectations for content (concept attainment), application (knowledge of processes), and experiential knowledge.

Areas of importance	Range of emphasis (%)	Suggested assessment techniques
Content (concept attainment)	20 – 30%	Ongoing student activities including written assignments, presentations, homework, attendance at workshops and symposiums
Application (knowledge and application of basic competencies and processes)	30 – 40%	Checklists indicating achievement of basic competencies related to pork production
Experiential (application of knowledge, developing skills and abilities, processes and attitudes using actual situations, site visitations and work study opportunities)	30 – 50%	Learning contracts (personal development and application of skills, abilities and attitudes) Student Reference Manual including appropriate ongoing documentation indicative of independent learning Work study component assessment

Refer to Saskatchewan Learning's *Student Evaluation: A Teacher Handbook* (1991) for examples of a variety of assessment (gathering data) and evaluation (making judgements based upon the gathered data) techniques.

Program Evaluation

Program evaluation is the systematic process of gathering and analyzing information about some aspect of a school program in order to make a decision, or to communicate to others what is happening in a program.

By its nature, Pork Production 10, 20 can accommodate the interests and needs of each student. The course also depends on the co-operation of farmers-trainers. Although assessment is time-consuming, the course should be assessed regularly to ensure that:

- the program is meeting the needs of the individual student
- the co-operating farmer-trainer/student relationship is successfully operating
- the program provides meaningful awareness, adequate exploration opportunities, and relevant experiences.

Techniques for gathering and analyzing information about the course include anecdotal records and interviews as well as surveys at various times of the year. The information that is gathered can be used to make decisions about the program in future years.

Roles, Responsibilities and Accountability

The following tables indicate the roles of teachers, farmer-trainers and students involved in Pork Production 10, 20.

Teacher
Read, interpret and comply with policy regarding Work Study.
Identify course needs of students and ensure the registration process.
Determine if the work site is acceptable. Facilitate the location and approval of a suitable training site. The co-operating farmers-trainers should: <ul style="list-style-type: none">• be qualified in the occupation• be able and willing to give direction to the student• have time to supervise and give direction.
Ensure that the work place is safe, complying with Occupational Health and Safety Standards.
Supervise the student's on-site work experience in accordance with school and Saskatchewan Learning policies.
Monitor student and co-operating farmer-trainer on a regular basis for progress and results on training.
Provide for sound education program for students.
Evaluate students.

Student
Show initiative in taking the course and understanding the course requirements.
Establish an individual learning contract.
Participate in training sessions, symposiums, and meetings.
Learn the knowledge and skills outlined in the course to the level required.
Work with the co-operating farmer-trainer to learn and acquire basic competencies.
Maintain records in the Student Reference Manual.
Keep records, prepare reports, and complete other evaluation procedures required by the teacher to receive Secondary Level credit in the course.

Co-operating Farmer-Trainer
Participate in an orientation to the ATEC Program.
Spend time and energy to help in the training of the student.
Provide a safe, learning environment for the student.
Ensure that the student has achieved competence in the skills according to the various standards outlined in the course.
Communicate with the teacher on the student's program.

* These tables have been modified from Battle River Regional Division #31 (1997), *Green Certificate Program: Handbook for Administrators and School Coordinators*, Camrose, AB.

Core and Optional Modules for Pork Production 10

Module 1: Saskatchewan's Pork Industry (Core)

Suggested Time: 3-4 hours

Level: Introductory

Prerequisite: None

Module Overview

This module is used to provide an overview of Saskatchewan's pork industry. It also gives students a basic understanding of how pork is marketed.

Foundational Objectives

- To develop an awareness of Saskatchewan's pork industry.
- To develop an understanding of how pork is marketed.
- To develop an awareness of the market information available to producers.
- To observe, assist or demonstrate knowledge about Saskatchewan's pork industry.

Common Essential Learnings Foundational Objective

- To synthesize ideas gleaned from current reading, discussion, viewing or presentations with prior knowledge and understanding. (COM)

Learning Objectives	Notes
1.1 To develop an understanding of the pork industry.	<p>Invite a pork specialist/producer to speak to students in general about the pork industry. Alternatively, have students gather information from various sources.</p> <p>Have students prepare a description of the pork industry including the global market and an overview of the Saskatchewan pork industry.</p>
1.2 To develop an understanding of the types of hog operations.	<p>Describe the following types of hog operations to students:</p> <ul style="list-style-type: none">• farrow to finish operations which include the entire production cycle• farrow to wean operations which maintain a breeding herd and sell the offspring• grower-finisher operations which purchase weaners and feed them until market weight. <p>Introduce the appropriate terminology to students as these types of operations are being described (i.e., sows, boars, weaners).</p>
1.3 To describe the basic steps involved in marketing hogs.	<p>At this level, students should develop only a basic understanding of marketing hogs. Marketing involves gathering and making decisions about when to buy or sell piglets or finished pigs.</p> <p>Have students provide a description of the various kinds of markets used in pork production.</p>

Module 2: Farm Safety (Core)

Suggested Time: 7-9 hours

Level: Introductory

Prerequisite: None

Module Overview

This module is used to establish the critical importance of farm safety. Students are alerted to become aware of a variety of potential farm hazards. Students are also introduced to safety precautions and procedures associated with operating and maintaining farm vehicles.

Teachers, students and farmers/on-site trainers should be familiar with farm safety including taking a farm safety audit and requiring continuing compliance with farm safety precautions. Further information can be obtained from the Farm Safety Division, Occupational Health and Safety, Saskatchewan Labour.

The significance of farm safety should be reinforced by stipulating to students that failure to demonstrate farm safety procedures would result in non-completion of the program.

Foundational Objectives

- To understand and use farm safety procedures at all times.
- To be able to recognize potential hazards on farms.
- To observe, assist or demonstrate farm safety skills.

Common Essential Learnings Foundational Objective

- To understand how technology influences occupational roles and affects the work site (e.g., occupational health, safety, etc.). (TL)

Learning Objectives	Notes
2.1 To identify potential farm hazards.	Have a farm safety specialist talk to the students about general farm safety. Use site visitations and have students identify potential hazards and precautionary measures. Explain why these areas need cautionary attention. Contact Saskatchewan Labour, Prevention Services Branch, (787-8399 or 1-800-567-7233) for more information.
2.2 To describe the use of safety guards, shields, and other safety devices used on farm equipment.	Demonstrate a safety walk around all machinery and other devices to check for the placement and installment of safety devices. Point out the use of safety guards, shields and other safety devices used on farm equipment. Have students demonstrate the ability to locate, read, and comprehend the warning messages on the farm equipment.

Learning Objectives	Notes
	<p>Involve students in a discussion on farm safety around pigs and specialized equipment.</p> <p>Student Reference Manual: Have students prepare a safety checklist and inspection to be used on a routine basis in a swine barn.</p>
2.3 To describe the kind of proper clothing and protective gear necessary to observe farm safety.	Discuss the kind of clothing, footwear, gloves, glasses, and breathing and ear devices necessary to work in a swine barn or when operating farm machinery. Identify the farm jobs or situations that warrant these precautionary measures.
2.4 To distinguish between a safe practice and an unsafe practice when using a number of manual and power tools as well as lifting equipment such as jacks and winches.	Manual and power tools as well as lifting equipment (jacks and winches) are used by all production sectors. Many times students do not recognize that these power tools and lifting equipment can be potentially dangerous. Have students examine the safety hazards associated with these kinds of small tools, jacks or winches.
2.5 To identify potential fire hazards and prevention procedures on farms.	Fires on farms can be caused by a variety of sources. Have students list the various fire hazards on farms. Have students describe fire prevention on farms and investigate various types of fire equipment.
	<p>Student Reference Manual: Have students prepare a list and description of the various types of fire extinguishers.</p>
2.6 To know when and how to use basic First Aid.	Basic First Aid is an essential skill on farms. Students would benefit from taking First Aid courses. Invite a practical nurse or St. John's Ambulance personnel to instruct students in basic First Aid such as cuts, burns, sprains, and breaks. Students should be familiarized with emergency procedures for contacting police, ambulance and fire department.
	<p>Student Reference Manual: Have students prepare a list of basic First Aid procedures.</p>

Module 3: Communications (Core)

Suggested Time: 3-4 hours

Level: Introductory

Prerequisite: None

Module Overview

Effective oral and written communication skills are important skills in all areas of pork production. Throughout the course, students should be encouraged to develop and use effective verbal and written communication skills. An important component of effective communication is the use of appropriate industry language including accurate technical terms. Teachers may wish to have students establish vocabulary lists.

Foundational Objectives

- To develop effective oral and written communication skills.
- To observe, assist or demonstrate effective communication skills in pork operations.

Common Essential Learnings Foundational Objectives

- To gradually incorporate the vocabulary of pork production into their talk and writing. (COM)
- To understand and use organizational structures within the subject area (e.g., to order ideas sequentially or chronologically, to compare and contrast, to discern cause and effect). (COM)

Learning Objectives	Notes
3.1 To understand the need for reliable information throughout all activities associated with pork production.	<p>Providing and understanding current and reliable information involves a number of effective oral and written communication skills. Discuss with students the various kinds of communication required in pork production including reading and forwarding messages, reading and interpreting animal health products, calculating feed rations or rates of gain, and interpreting manuals and other types of information.</p> <p>Often, non-verbal communication can interfere with messages. Role play various situations, with students, emphasizing employee/employer interactions.</p>
3.2 To identify the characteristics of effective verbal and written communication.	<p>Effective use of words is very important in making sure that the message is clearly understood. Effective communication depends on:</p> <ul style="list-style-type: none">• choice of words• simple instructions and answers• concise, specific language. <p>In pork production, communication is critical not only to the operation of the farm but to follow safety procedures. Have students identify the information and communication needs used in a swine barn.</p>

Learning Objectives

Notes

- 3.3 To develop skills in receiving and passing on messages and important information.

Farmers are continually receiving and passing on information on everything from machinery repairs to livestock market reports. There are specific skills that a student should use when receiving a message that needs to be passed on as well as when giving messages. Often, these messages are verbal (i.e., telephone, face to face) or through electronic communication such as faxes and e-mail.

Have students compose and pass on messages and information that might be used on a farm through a variety of ways.

Examples include:

- telephone messages with written notes
- messages left and retrieved through voice mail or answering machines
- messages delivered or received through faxes
- face to face messages and information.

- 3.4 To locate and use specific information contained in a variety of publications.

Pork production makes use of many sources of information. Finding and sorting information is an important skill particularly for technical information including farm equipment maintenance, farrowing information, and animal health products. Provide students with a number of manuals and technical information. Have students practise locating, sorting and discussing when to use specific information.

Student Reference Manual: Have students prepare a list of useful manuals and publications relating to pork production.

Module 4: Career Exploration (Core)

Suggested Time: 3-4 hours

Level: Introductory

Prerequisite: None

Module Overview

Students should explore the career options available to them throughout the course on pork production. This module can be used to guide students' future career and educational plans. It also introduces students to the concept of employability skills.

Foundational Objectives

- To create an awareness of the post-secondary programs, careers, and employment opportunities in pork production.
- To develop a career plan.
- To understand the concept of employability skills.
- To observe, assist, or demonstrate skills relating to career exploration and employability.

Common Essential Learnings Foundational Objectives

- To seek information through a steadily expanding network of options including other libraries, databases, individuals and agencies. (IL)
- To recognize that learning is continuous from birth to death (e.g., life experiences). (IL)

Learning Objectives	Notes
4.1 To develop individual career profiles.	<p>This learning objective is used to help students identify their areas of interest and abilities in pork production. This will enable students over the long term to maintain their enthusiasm as well as act as a positive reinforcement. Ask students to create an inventory of activities and interests.</p> <p>Assist students in identifying their academic and non-academic strengths including their present knowledge base. Encourage students to value their life experiences and their abilities outside of school. Emphasize the importance of relevant experience and expertise.</p> <p>Have students prepare a list of the many kinds of career opportunities in pork production. Have students research career clusters and the range of occupational opportunities related to pork production. Encourage students to investigate various factors before making career choices including:</p> <ul style="list-style-type: none">• description of the work duties• personal qualities an individual must possess to succeed in the career• processes required to become certified within the career or trade

Learning Objectives

Notes

- length of education and training
- school locations
- cost of education and up-grading
- trends within the business or career
- worst and best aspects of the job
- starting salary
- opportunities for advancement.

Have students use this information to develop individual career profiles and a statement of educational and career goals related to pork production.

- 4.2 To identify basic personal and employability skills.

This learning objective is used to reinforce the notion of employability skills including:

- teamwork
- punctuality
- personal responsibility
- positive attitude
- co-operation.

Have students provide a description of each of these employability skills and role play situations demonstrating situations where these skills would come into play.

- 4.3 To understand and practise time management.

Time management is an important lifelong skill. Have students list the jobs on a particular farm that need to be done on a weekly, monthly, seasonal or yearly basis. Prioritize the jobs and ask students to prepare a time management system.

Have students list their own jobs including schoolwork and extra curricular activities. Have students prioritize and prepare a personal time management system.

Student Reference Manual: Have students prepare a personal time management system.

Module 5: Planning for Pork Production (Core)

Suggested Time: 5-6 hours

Level: Introductory

Prerequisite: None

Module Overview

This module is used to outline the basic types of planning required for pork production.

Foundational Objectives

- To understand basic types of planning used in the production of pork.
- To collect and use information related to farm planning.
- To observe, assist, or demonstrate skills used in planning for pork production.

Common Essential Learnings Foundational Objectives

- To distinguish between primary and secondary sources of information. (COM)
- To apply conclusions and generalizations to new situations. (CCT)

Learning Objectives	Notes
5.1 To describe the kinds of plans that are used in pork production.	<p>There are a number of plans used daily, monthly and yearly in pork production. Some of these include:</p> <ul style="list-style-type: none">• financial plans• breeding plans• cash projections• equipment usage records• work schedules. <p>Discuss with students the basics of a plan, what it is used for and how it is developed. Plans are used to assist in the daily, monthly and yearly operation of a swine barn. They are developed using a review of past performance, identifying future goals, and suggesting strategies to help achieve the goals. In addition, it is important to monitor progress to see how well the plans work.</p> <p>Describe the basic elements of planning. Ask students to apply these basics and to provide a brief description using these elements in a plan for pork production. Have students list the kinds of information they would need to complete in each of these plans.</p>
5.2 To develop a plan for the production of pork from farrow to finish.	<p>This exercise is used to draw students' attention to some of the factors that producers must consider when making decisions about pork production. At this basic level, students are introduced to planning through basic examples of planning for</p>

Learning Objectives**Notes**

pork production. Inform students of the purpose of the plan (i.e., to make good decisions). Have students discuss why it is important.

Students need to consider the various resources that are needed to operate a pork operation. Some of these resources include:

- land features including soil types and water sources/availability
- availability to breeding or feeding stock
- accessibility to markets
- sources of feed and prepared rations
- ability to handle manure
- other environmental considerations.

Have students identify and describe each of the above.

Module 6: Farm Equipment Maintenance and Repair (Core)

Suggested Time: 12-14 hours

Level: Introductory

Prerequisite: None

Module Overview

Regardless of the type of operation, farm equipment maintenance and repair are routine operations. This module is used to give students an introduction into general maintenance and repair of farm machinery. Farm safety is stressed throughout the module.

Note: In dealing with all modules on farm equipment, teachers should inform students of the dangers and legalities of under-aged drivers operating farm machinery.

Foundational Objectives

- To develop basic skills and abilities in the repair and maintenance of farm machinery and swine barn equipment.
- To develop skills and abilities in the use of hand and power tools which are used to service farm machinery.
- To observe, assist, or demonstrate skills associated with the repair and maintenance of farm machinery.

Common Essential Learnings Foundational Objectives

- To determine own learning needs. (IL)
- To analyze data to create hypotheses, predictions and estimates. (CCT)

Learning Objectives	Notes
6.1 To develop skills in the processes associated with regular machinery maintenance.	<p>The first step in maintenance of farm machinery is to develop a preventive maintenance process (i.e., checking oil, and fuel levels, cleaning radiators, preventing chaff build-up, and monitoring gauges.</p> <p>Explain regular maintenance processes to students. Have students use the manuals of several different kinds of farm equipment to describe preventive practices related to particular machines.</p> <p>Student Reference Manual: Have students develop a checklist of preventive maintenance procedures for each piece of pork production equipment.</p>
6.2 To identify and describe a variety of different types of tools (power and manual).	<p>On a farm operation, there are a number of screwdrivers, wrenches, and other tools used in the daily maintenance and operation of farm machinery such as the daily maintenance of the machinery, daily routine check-ups of pulleys, or adapting the machinery to different uses.</p>

Learning Objectives

Notes

Each tool has a distinct operational procedure. Have students describe how to use a variety of common farm tools. Students should examine and demonstrate the standards illustrated in the operator's manual of each specific tool.

Have students determine the different types and sizes of wrenches (manual and power) that best suit the job that the wrench is designed to achieve.

Demonstrate that the correct selection and use of the specific tool to fit the correct screw or bolt is very important to prevent damage to the tool, bolt or screw.

Distinguish between a safe practice and an unsafe practice when using specific manual and power tools.

- 6.3 To identify and describe the characteristics of the common farm mechanical, hydraulic, and hand jacks and winches.

In order to maintain machinery, it is often necessary to hoist or elevate machinery, parts of machinery, or other objects while working around the farm. There are a number of different ways to hoist an object depending on the structure of the article. It is important for students to be aware of the weight range, strength, and capacity of the jack and the weight of the item being lifted.

Have students compare and contrast the uses and efficiencies of the direct vertical, automotive, floor type, and any other lift. Identify the type of lift that is best suited for each job.

Student Reference Manual: Have students prepare a summary of the type of common farm mechanical, hydraulic and hand jacks and winches.

- 6.4 To identify the dangers and hazards associated with common lifting equipment.

Overloading, tipping of the jack, and damaged or worn equipment can be just a few of the hazards when using lifting equipment. Select and illustrate the dangers and hazards that are associated with common lifting equipment.

Demonstrate the correct operating procedures in using the jack or hoisting equipment in a safe and efficient manner.

Learning Objectives	Notes
6.5 To identify the transportation regulations for farm equipment and livestock on public roads.	<p data-bbox="646 216 1458 432">Transporting livestock and large farm equipment requires skills and caution. The province and rural municipalities have a number of regulations relating to agriculture. It is the responsibility of the farmer or rancher to know and abide by these regulations. Legal settlements for negligence can be very costly to a farming operation.</p> <p data-bbox="646 474 1458 653">Identify and explain licensing, insurance, operator's qualifications and the <i>Dangerous Goods Transportation Act</i> for handling all types of farm equipment on public roads. Consideration should be given to liability insurance, license class, and types of roads.</p> <p data-bbox="646 695 1458 800">Examine and describe the requirements regarding width, height, length, lighting, slow moving signs, clear visibility and seasonal restrictions on all farm equipment.</p> <p data-bbox="646 842 1458 947">Livestock transportation regulations also specify the types of trailers that can be used as well as restrictions to the amount of time livestock can be hauled.</p> <p data-bbox="646 989 1458 1167">Student Reference Manual: Have students prepare a number of descriptions/situations of transportation of livestock or farm equipment. Remind students to include outside sources of information for specific rules and regulations (e.g., Highway Traffic Board for over-width, over-height vehicles).</p>
6.6 To understand the need for having emergency equipment.	Outline and give examples of the tools and emergency equipment which are required if the farm machinery has a crisis while in transport on a public road. Test students' knowledge using a short answer test.

Module 7: Swine Anatomy and Physiology (Core)

Suggested Time: 4-5 hours

Level: Introductory

Prerequisite: None

Module Overview

This module introduces students to swine anatomy and physiology including pig peculiarities. Students will become familiar with the terminology to describe pigs. Students should be reminded to use appropriate gender descriptions throughout the course. Descriptions of common pig breeds are included in this module.

Foundational Objectives

- To develop an awareness of the basic physical characteristics of pigs.
- To understand the physical differences of pigs according to gender and age.
- To observe, assist, or demonstrate knowledge of swine anatomy and physiology.

Common Essential Learnings Foundational Objectives

- To analyze tables of contents of several texts or reference books on the same topic for depth and breadth of topic coverage. (COM)
- To use a variety of resources to cover the breadth and depth of a topic. (COM)

Learning Objectives	Notes
7.1 To describe the basic physical characteristics of pigs.	<p>Have students identify the sexes of the swine by proper name and list their main distinguishing characteristics (sows, boars, gilts, weaners).</p> <p>Identify the main physical characteristics (age, frame, size, weight) and ideal types for each. Have students gain practical experience in identifying and judging quality animals. Use diagrams to indicate the parts of a pig.</p> <p>Student Reference Manual: Have students find or produce diagrams indicating the physical characteristics of pigs.</p>
7.2 To identify pigs by breeds and breed characteristics.	<p>Producers need to select the most suitable breed of swine for their particular operation. Each breed has its own special characteristics. Knowing and understanding each breed's uniqueness is helpful in planning for the pork operation.</p> <p>Purebred animals provide the foundation or seed stock for both commercial and purebred swine operations. Explain the relationship between purebred breeders and commercial hog operations. Explain the benefits of cross-breeding.</p>

Learning Objectives

Notes

Have students research and compare the different breed types of cattle used in a beef pork operation. Have students list the qualities of each breed and state what their strengths and weaknesses.

Student Reference Manual: Have students identify the names and locations of various breeders in their area. Students should include an inventory of quality and availability.

Module 8: Basic Handling of Pork (Core)

Suggested Time: 3-4 hours

Level: Introductory

Prerequisite: None

Module Overview

This module provides students with the basic knowledge and procedures for the handling of pork in a pork operation. Students should be reminded of the information and practices contained in the module on farm safety.

Foundational Objectives

- To develop an understanding of the relationship between the physical characteristics of animals and their behaviour.
- To observe, assist, or demonstrate an understanding of pig behaviour.

Common Essential Learnings Foundational Objectives

- To ask relevant questions in order to further their own understanding. (COM)
- To make careful observations and to draw conclusions from those observations. (COM, CCT)
- To demonstrate humane care of animals. (PSVS)

Learning Objectives	Notes
8.1 To understand the causes and affects of stress on pigs.	<p>The ways in which the operator of a pork operation handles pork requires knowledge of the basic physiology and structure of the animal. Herding, handling, and providing health treatment are just a few of the daily routine duties that are involved in a pork operation. Each of these can result in stress which negatively affects the pig by reducing productivity. For example, stressed animals have higher maintenance requirements. The animals also release a stress hormone which can interfere with productivity, reproduction and immunity from disease. Stressed animals may also become nervous, agitated or aggressive.</p> <p>Discuss the various causes of stress and what can be done by operators and workers to reduce the stress levels for pigs. Stressors include:</p> <ul style="list-style-type: none">• genetic influences• management• handling• temperature• nutritional deficiencies or change in diet• crowding• confinement, noise and forced movement• change in animals within a group.

Learning Objectives	Notes
8.2 To describe the vision, hearing and movement patterns of swine.	<p>Knowing the physiological and anatomical characteristics of swine is helpful in understanding swine behaviour.</p> <p>Invite a livestock specialist or veterinarian to discuss pork characteristics such as vision, hearing and footing. Include pig and herd behaviour in the discussion. Have veterinarians, barn operators or livestock specialists discuss noise and handling situations which can hurt, cause stress, or excite the pigs.</p>
8.3 To develop the ability to handle pigs in a safe and humane way.	<p>Operators must be very familiar with the behaviours of pigs in order to handle them in a safe and humane way.</p> <p>Handling and sorting should be done in a quiet, relaxed way. Pigs should not be rushed or excited. Give pigs time to rest if moving or sorting takes a long time. The use of prods, canes or slappers should be kept to a minimum.</p> <p>Demonstrate handling and sorting to students emphasizing patience and quietness.</p> <p>Have students:</p> <ul style="list-style-type: none"> • identify the proper techniques to reduce noise situations and stress in swine barns • outline the nature of a pig's vision and describe the handling practices that are used around pigs to reduce noise stress. • recognize and distinguish the structural features of a pig's foot and the best conditions for footing to reduce injury. • identify the situations in which pigs can be injured through improper handling.

Module 9: Pig Nutrition (Core)

Suggested Time: 4-5 hours

Level: Introductory

Prerequisite: None

Module Overview

This module looks at the nutritional requirements of pigs. Given that 50 percent of the cost of production comes from feed, it is important that students understand the nutritional components required by pigs.

Foundational Objectives

- To understand the importance of meeting the nutritional requirements of pork.
- To observe, assist, or demonstrate knowledge about the nutritional requirements and feeding of pigs.

Common Essential Learnings Foundational Objectives

- To distinguish between quantitative situations where precision is required and those where approximations are acceptable. (NUM)
- To distinguish between primary and secondary sources of information. (COM)

Learning Objectives	Notes
9.1 To understand the importance of meeting the nutritional requirements of pork.	<p>Nutrition and the management of a nutritional plan is critical in raising pigs. Sows must be in excellent shape for the breeding/reproduction cycle, feeding of piglets, and maintaining a healthy herd. Carcass and meat quality are directly affected by what a pig eats. For example, imbalanced rations can cause a number of problems ranging from poor production to excess fat. Other problems such as mineral deficiencies can cause changes to the growth rate or physical problems.</p> <p>Have students consider the physiological state of the pig and indicate that the nutritional requirements change with age and the environment.</p> <p>Invite a veterinarian to discuss the problems associated with inadequate nutrition or the effect that insufficient water intake has on pigs.</p>
9.2 To identify the components of a feeding plan.	<p>Have students research the basic components of a feeding plan including:</p> <ul style="list-style-type: none">• different rations, properties and quantities required for the age and sex of pork (e.g., piglets, weaners, bred sows, boars).• water quality and quantity• feeder design. <p>Feeders and waterers should be checked daily. Feeders should be checked to see that the feed is flowing freely and that there is</p>

Learning Objectives

Notes

no wastage. Waterers should be checked so that the water is flowing freely and that there are no contaminants in the bowls.

Feed consumption should be recorded and monitored on a regular basis. Monitoring consumption and productivity is a valuable source of information for operators and employees on a continual basis. Feed records can help producers detect problems.

Review feed consumption methods used in the swine barn. Ensure that students are able to understand and complete the feed consumption charts.

Student Reference Manual: Have students prepare feed consumption charts for a variety of ages and types of pigs.

- 9.3 To describe the basic nutritional requirements of pigs.

Invite a veterinarian, pork producer, or livestock specialist to identify the components of a feed ration for various ages and stages of pigs. Include vitamins and minerals.

Student Reference Manual: Have students prepare charts listing the basic nutritional requirements of various ages and stages of pigs.

- 9.4 To develop the ability to read and interpret feed labels. (COM)

Using a number of different labels from feed rations have students read and decipher the nutritional content of various types of feed. (COM)

- 9.5 To calculate feed rations. (NUM)

Using the information gathered from producers, veterinarians or livestock specialists as well as the labels from various types of feed rations work with students to help them compute the amount and type of feed for various groups of pigs as well as the number and times for feeding.

Feed charts should be made and verified by producers.

Student Reference Manual: On completion and with the verification of a producer or other knowledgeable person, have students maintain records of feed rations, amounts and times.

Module 10: Feeding Equipment (Core)

Suggested Time: 6-8 hours

Level: Introductory

Prerequisite: None

Module Overview

This module gives students basic information about various types of feeding equipment used in hog barns. Remind students at all times of basic farm safety.

Foundational Objectives

- To understand and know farm safety procedures associated with feeding equipment.
- To observe, assist, or demonstrate skills and abilities in the safe use of feeding equipment.

Common Essential Learnings Foundational Objective

- To develop an understanding of the precautionary and preventive processes and procedures students should use in everyday situations. (TL, CCT).

Learning Objectives	Notes
10.1 To demonstrate the maintenance and operation of feeding equipment.	<p>Introduce students to a number of feeding systems to feed pigs. Some of these include:</p> <ul style="list-style-type: none">• augers to bring feed from bins• feed carts• mechanized conveyors to deliver feed to pigs (e.g., flex or coreless augers, solid core augers, cable with discs, chains with drags) through self or drop feeders• liquid feed systems. <p>Have students identify the various components of the particular feeding system used in the barn. Identify regular maintenance procedures including checking bearings and flighting, lubricating various bearings, greasing bearings and replacing worn bearings.</p> <p>Students should be able to describe or demonstrate the safe operation and maintenance of front-end loaders, augers, conveyors, and platform scales. Students should be knowledgeable about and able to identify the dangerous parts and hazards of operating these types of equipment.</p> <p>Ensure that students demonstrate precautionary steps that need to be taken to eliminate the possibility of dangerous situations.</p>

Learning Objectives	Notes
10.2 To demonstrate the operation of feed milling and processing equipment.	<p data-bbox="646 212 1463 317">Demonstrate to students the basic components of a feed mill or processing equipment used for pork production. Indicate all safety precautions including the use of ear plugs and face mask.</p> <p data-bbox="646 359 1463 499">Demonstrate how this equipment is used. Have students demonstrate their knowledge and ability to use this equipment. Students should be thoroughly familiar with the hazards associated with operating the equipment.</p> <p data-bbox="646 541 1463 646">Familiarize students with the operator's manual. Provide plenty of opportunity for students to use the manuals for maintenance and repair.</p>

Module 11: Pork Health Care (Optional)

Suggested Time: 5-7 hours

Level: Introductory

Prerequisite: None

Module Overview

This module can be used to enhance the knowledge of students already familiar with pork. Students will investigate basic health care of pork. When large numbers of hogs are housed under confinement conditions the possibility of spread of disease increases dramatically. An understanding of common diseases and disorders will help ease a potentially serious situation.

Foundational Objectives

- To develop an understanding of the concept of herd health.
- To develop basic knowledge, skills and abilities related to basic pork health care.
- To become knowledgeable about common diseases and disorders in pigs.
- To observe, assist, or demonstrate the concept and objectives of herd health.

Common Essential Learnings Foundational Objectives

- To demonstrate humane care of animals. (PSVS)
- To use a variety of resources to cover the breadth and depth of the topic. (COM)

Learning Objectives	Notes
11.1 To describe the concept and procedures associated with basic herd health.	<p>At this level, students should become familiar with the concept of herd health and the basic procedures of maintenance and treatment which maintain the health of the pigs in a variety of conditions. Invite a local veterinarian to talk about preventive measures.</p> <p>Student Reference Manual: Have students prepare a checklist of preventive measures and practices which should be used in a pig barn or on the farm.</p>
11.2 To demonstrate a basic knowledge of animal drug products.	<p>A component in maintaining healthy pigs is being able to describe the basic nature of drug products available. It is important to know what each drug is like in nature and its use. An operator must interpret the labels and determine the dosage as well as the correct administration style. The drug products must also be stored properly for further use.</p> <p>Have students identify a drug label or product information. Describe the use and purpose of each drug. Interpret the drug label or product for administration style, dosage, and frequency.</p> <p>Describe the possible contamination hazards during storage and handling. Identify the techniques to minimize these hazards.</p>

Learning Objectives

Notes

Explain the administration style with the proper equipment, restraining procedures, and economic considerations.

Student Reference Manual: Have students prepare a list of the most common animal health products to have on hand in a pork operation.

- 11.3 To develop the ability to administer animal First Aid

Pork operators must have the ability to identify the situation and make a judgement call in order to decide if a veterinarian should be involved. For economic reasons, it is important to establish a basic First Aid kit to treat the animals instead of calling outside help.

Student Reference Manual: Have students make a list for a First Aid supply kit that is appropriate for a pork operation.

- 11.4 To identify common diseases and disorders in a pork operation.

A pork operator is required to demonstrate a basic knowledge of swine health disorders. The ability to recognize and identify common symptoms, the nature of the diseases, and the precautionary measures that prevent the diseases are essential in running a successful operation. Have a veterinarian discuss what to look for in diagnosing basic animal health problems.

Student Reference Manual: Have students prepare a chart or reference list of common diseases and disorders in a pork operation. Have students include symptoms such as respiratory rate, skin conditions, eye or nasal discharge or weeping, injuries to feet and legs and digestive diseases. Students should also identify the causes and describe a medication and/or prevention plan.

Module 12: Swine Barn Routine (Optional)

Suggested Time: 5-7 hours

Level: Introductory

Prerequisite: None

Module Overview

Swine barns have a number of routines that are performed on a daily or weekly basis. Other routines are practiced seasonally or on a monthly basis. This module provides an introduction into some of the basic routines of swine barns. Students should work with individual barn operators to become familiar with the particular routines of that operation.

Foundational Objectives

- To develop an understanding of some basic swine barn routines.
- To observe, assist, or demonstrate skills in carrying out basic swine barn routines.

Common Essential Learnings Foundational Objectives

- To recognize the importance of taking the responsibility for maintaining routines. (PSVS)
- To use a wide range of language experiences for developing students' knowledge of the pork production industry. (COM)
- To collect and organize quantitative information into a list, table, graph or chart and analyze this information to determine a conclusion. (NUM)

Learning Objectives	Notes
12.1 To demonstrate skills in the daily tasks.	<p>The first daily task should be a walk around the swine barn, observing and noting tasks that need to be done during that day. A quick check will also help plan the day's priorities.</p> <p>Animals should be checked every day to alert operators for any potential problems. This can be done during feeding or cleaning and maintenance. Animals should be observed for any abnormal behaviour such as lying down or being off by themselves. Sick or injured animals should be identified, treated and observed at regular intervals.</p> <p>Feeding should be done at the same time each day to eliminate stress and maximize productivity. Feeders and waterers need to be checked and cleaned.</p> <p>Other daily activities include:</p> <ul style="list-style-type: none">• routine maintenance• cleaning• heat detection or breeding• treating sick or injured animals• temperature and ventilation checks• processing piglets• updating records.

Learning Objectives

Notes

Student Reference Manual: Have students describe a plan for the daily routine of a swine barn.

- 12.2 To develop an understanding of the weekly tasks.

Some of the routine tasks done on a weekly basis include:

- routine preventive maintenance
- processing and weaning pigs
- breeding
- inducing farrowing
- ordering feed
- weighing pigs
- equipment checks
- vaccinations and pregnancy checking.

Work with the operator of a swine barn to identify the routine tasks.

Student Reference Manual: Have students identify the routine tasks using a checklist of activities that need to be done on a weekly basis.

- 12.3 To develop an understanding of monthly, seasonal or annual tasks.

Routine tasks on an annual or seasonal basis include:

- emptying manure storage
- preventive maintenance of ventilation system
- servicing and maintaining building and equipment
- repairing pens and farrowing crates
- maintaining heating equipment
- servicing watering and manure handling equipment
- cleaning drug cabinets
- conducting an inventory of drug and medical supplies.

Student Reference Manual: Have students make a checklist of routine tasks done on a monthly, seasonal or annual basis.

Module 13: Swine Barn Watering Systems (Optional)

Suggested Time: 1-3 hours

Level: Introductory

Prerequisite: None

Module Overview

An abundant and clean supply of fresh water is of critical importance to all pork producers. This module is considered optional as it pertains to the watering systems of swine barns although there is application through the production sector.

Foundational Objectives

- To become knowledgeable about swine barn watering systems.
- To observe, assist, or demonstrate the ability to monitor and maintain swine barn watering systems.

Common Essential Learnings Foundational Objective

- To develop the ability to maintain, monitor and repair swine barn watering systems. (CCT, COM)

Learning Objectives	Notes
13.1 To develop an understanding of water needs for pigs.	<p>Pigs need an abundant supply of safe, clean water. Most pig barns water all ages of pigs with nipple waterers. Most pigs accept these nipples without problems. Swine barn workers must check these nipples constantly to ensure that they are set to deliver water at the right flow rate, and positioned so that all the pigs can drink from it. The nipples must also be checked for sediment or small particles which can interfere with the water flow.</p> <p>Investigate the daily water consumption of swine.</p> <p>Student Reference Manual: Have students chart the daily water consumption of various sizes of pigs.</p>
13.2 To describe water filtration equipment.	<p>While pigs are relatively tolerant of poorer quality water, it is obvious to most producers that the best water available should be used in order to maintain productivity. Many producers choose to improve the water quality in their barns by using water filtration equipment.</p> <p>There are a number of different ways of maintaining or improving water quality. Have students investigate which water filtration system is used in the swine barn. Some of these systems include chlorination or treating dugouts with copper sulphate.</p> <p>Have students describe the water filtration system used.</p>

Learning Objectives

Notes

13.3 To describe the water supply system including the pressure pump, tanks with controls and distribution.

The water supply system includes all the components as well as the water source which brings water into the barn. These components include the pump, pressure tank with controls and distribution pipe to all buildings as well as water treatment equipment.

Show students the water supply system. Demonstrate the components of the pressure system and the check points for trouble shooting.

Student Reference Manual: Have students make a diagram of the water supply system. Students could also develop a checklist for inspection and routine maintenance of the system.

Module 14: Recordkeeping in a Pork Operation (Optional)

Suggested Time: 1-3 hours

Level: Introductory

Prerequisite: None

Module Overview

This module is used to introduce students to the importance of recordkeeping in pork operations. While this module is listed as optional at this level, it is a requirement at the 20 level.

Foundational Objectives

- To develop skills in developing and using records in pork operations.
- To observe, assist, or demonstrate the ability to keep accurate records used in pork production.

Common Essential Learnings Foundational Objectives

- To recognize the importance of taking the responsibility for maintaining routines. (PSVS)
- To collect and organize quantitative information into a list, table, graph or chart and analyze this information to determine a conclusion. (NUM)

Learning Objectives	Notes
14.1 To understand the importance of records.	<p>Recordkeeping in hog operations include the following:</p> <ul style="list-style-type: none">• determining and monitor daily activities• providing communication between employees, co-workers, employers, veterinarians, and feed specialists• assisting in keeping track of inventory• helping determine productivity. <p>Have students discuss the importance of keeping livestock records as well as the kinds of records that might be of value.</p>
14.2 To design and maintain accurate records.	<p>Have students prepare and demonstrate the use of records for:</p> <ul style="list-style-type: none">• daily activities• inventory• feeding charts• sick or injured animals. <p>Student Reference Manual: Have students gather or design records used in a pork operation or swine barn.</p>

Module 15A, B: Work Study Preparation and Follow-up Activities (Core)

Suggested Time: 5-10 hours

Level: Introductory, Intermediate

Prerequisite: None

Module Overview

This module is used to prepare students for work study placement. Learning objectives include pre-placement information, preparation for interviews, and expectations for the workplace experience.

Foundational Objective

- To develop workplace skills in the pork production sector.

Common Essential Learnings Foundational Objective

- To increase awareness of a variety of employability skills in the work site. (CCT, COM, PSVS, TL)

Learning Objectives		Notes
15.1	To create an awareness of the expectations of each of the partners in the work study component.	<p>In order to establish a successful working relationship with all of the partners involved in the work site, it is important to define the expectations of each partner.</p> <p>Refer to Guidelines for Work Study, a section of the <i>Practical and Applied Arts Handbook</i> (2003), for expectations of business/work site, student, teacher monitor and school.</p>
15.2	To determine factors that would affect the student contribution at the work site. (CCT)	<p>The students may formulate a list of what they bring to the work site and how each may impact on their jobs. Their lists may include topics such as:</p> <ul style="list-style-type: none">• school subjects• past experiences• self-concept and personality• needs, values and interests• knowledge, skills and attributes• career goals and plans. <p>Ask students to do a self-assessment of skills using the influences in the above list as a guide. Have them explain how these skills are valuable to the pork industry. Try to incorporate the value of communication and teamwork in the discussion.</p>

Learning Objectives	Notes
15.3 To foster an awareness of building good communication in the workplace.	<p>Discuss verbal and non-verbal communication. List some ways in which negative non-verbal communication may be addressed. Encourage students to role play ways of demonstrating effective techniques of verbal communication on the job when giving or receiving instructions, and when resolving conflict. With the use of case studies, divide the students into groups and have them role play to show how effective use of communication can be used to resolve conflict on the job.</p>
15.4 To develop a résumé and cover letter that can be forwarded to a potential employer.	<p>The student will develop a résumé and cover letter using the correct format. ATEC teachers can work with other staff members to ensure résumé and cover letter preparation is covered. The résumé and cover letter is currently addressed in English Language Arts, Information Processing, and Career and Work Exploration.</p> <p>The student should develop the résumé on a computer disk and update the résumé during the progression of the course as references are accumulated.</p> <p>If a student has already completed the résumé and cover letter in another course, the teacher may do a review and encourage the student to update the résumé. Each student shall submit a résumé for teacher approval prior to going to the work site.</p> <p>The résumé and cover letter may be used as an introduction to the employer at a work site prior to an interview with the student.</p>
15.5 To determine student guidelines in preparation for an interview.	<p>Through a classroom discussion or in groups, have students generate a list of guidelines for an interview. After the students formulate their list, the instructor may add missing items to the list.</p> <p>Outline and describe the three stages of an interview. Point out to the students in what stage each of their guidelines previously discussed will be used. A brief description of the three stages of an interview follows.</p> <p>The greeting involves an introduction between the student and employer. Discuss or demonstrate how this should be done.</p>

Learning Objectives

Notes

The **exchange** is where the employer asks a series of questions and engages in a conversation with the student about information on the résumé and other matters relating to the job placement.

The **parting** brings the interview to a close. It can be just as important as the greeting. Explain how this can be done.

Provide students with a list of questions frequently asked by employers or ask students to formulate a list in a group, and have students use the questions from their group list to role play the stages of the interview.

15.6 To discuss the interview.

After the student has completed the interview with the employer, do a follow-up activity. Review the interview with the student using the three stages as a point for discussion.

15.7 To develop procedural guidelines for the work site.

Discuss work site guidelines, related to the following factors, with students:

- transportation
- hours of work
- absence and tardiness
- procedures for conflict resolution
- role of the student, teacher and work site supervisor
- dress code
- job description
- school and employer expectations

Ensure that students understand these guidelines by asking students to describe each of these guidelines.

15.8 To relate feedback about the work placement.

Students should be encouraged to provide feedback about work placement including: where they were placed, type of business, duties, most rewarding experience, most difficult situation, and how they handled it.

It is recommended that each student send a thank-you note or card to the employer upon the completion of each work placement. If more than one placement has been made in the course, follow-up activities must be completed after each placement.

Module 16A, B: Work Study (Core)

Suggested Time: 25-50 hours

Level: Introductory, Intermediate

Prerequisite: 15A, B respectively

Module Overview

Refer to the Work Study Guidelines included in the *Practical and Applied Arts Handbook* for direction on implementing work study.

Foundational Objectives

- To be aware of the careers and opportunities in the field of agriculture that exist in Saskatchewan and other provinces.
- To integrate classroom learning with work-related learning.
- To increase awareness of employability skills as they relate to the work environment.

Common Essential Learnings Foundational Objectives

- To engage in a work study experience and develop entry level workplace skills that may lead to sustainable employment. (PSVS)
- To expand career research beyond the classroom setting. (IL)

Teachers need to use or design appropriate learning objectives for this module (e.g., to demonstrate ability to follow a “Training Plan”).

Note: Consult the Career and Work Exploration Curriculum Guide and the Department of Labour for content about Labour Standards, Occupational Health and Safety, and Workplace Hazardous Materials Information System (WHMIS). Add more depth regarding occupational health and safety if you offer several work studies during grade 11 or 12 in a course series.

Core and Optional Modules for Pork Production 20

Module 17: Marketing Hogs in Saskatchewan (Core)

Suggested Time: 3-4 hours

Level: Intermediate

Prerequisite: None

Module Overview

Module 1 gives students an overview of Saskatchewan's pork industry. This module builds upon that knowledge to include the marketing of finished hogs in Saskatchewan. Students are also made aware of some of the considerations necessary for transporting hogs.

Foundational Objectives

- To develop an understanding of the marketing of finished hogs.
- To develop an awareness of the market information available to producers.
- To observe, assist, or demonstrate knowledge about pork marketing.

Common Essential Learnings Foundational Objectives

- To read and interpret quantitative information found in newspapers, magazines and government, political and business publications and evaluate the validity of arguments based on such information. (NUM)
- To propose generalizations that explain relationships. (CCT)

Learning Objectives	Notes
17.1 To develop an understanding of the marketing of hogs in Saskatchewan.	<p>In the past, all finished hogs produced in Saskatchewan were marketed through the SPI Marketing Group. This system has changed and producers now have other options available. Invite a representative from SPI to discuss marketing options with the students.</p> <p>Have students prepare a report on the options available to pork producers for selling finished hogs.</p>
17.2 To describe the factors on which producers are paid for their hogs.	<p>The packing industry pays producers for their finished hogs based on the carcass weight and the estimated yield of the lean meat on the carcass. The ideal carcass weight desired by packers is between 75 and 89.99 kg.</p> <p>Discuss with students why packers have selected these as desirable factors for finished hogs.</p>

Learning Objectives	Notes
17.3 To develop the ability to select finished pigs for market.	<p>Developing an “eye” for selecting finished pigs takes time. The following process can assist in selecting finished pigs:</p> <ul style="list-style-type: none">• check records for pigs• weigh and examine pigs. Look for pigs that fall within a weight range of 97 and 112 kgs. <p>Work with the farmer-trainer to select finished hogs for market.</p> <p>Student Reference Manual: Have students prepare diagrams and descriptions for finished hogs.</p>
17.4 To become knowledgeable about transporting hogs to market.	<p>Inform students of the factors which should be considered when transporting hogs to market. Some of these include:</p> <ul style="list-style-type: none">• allow free access to water but do not feed heavily before shipping• handle hogs quietly• use a well-designed loading chute• sort hogs the night before loading and keep them in the same pen• do not ship hogs in extreme temperatures• check the animals shortly after loading to see if there is adequate ventilation• deliver hogs promptly.

Module 18: Farm Safety (Core)

Suggested Time: 3-4 hours

Level: Intermediate

Prerequisite: None

Module Overview

This module is used to establish the critical importance of farm safety. Students are alerted to become aware of a variety of potential farm hazards. Students are also introduced to safety precautions and procedures associated with operating and maintaining farm vehicles.

Teachers, students and farmers/on-site trainers should be well familiar with farm safety including taking a farm safety audit and requiring continuing compliance with farm safety precautions. Further information can be obtained from the Farm Safety Division, Occupational Health and Safety, Saskatchewan Labour.

The significance of farm safety should be reinforced by stipulating to students that failure to demonstrate farm safety procedures would result in non-completion of the program.

Foundational Objectives

- To understand and use farm safety procedures at all times.
- To be able to recognize potential hazards on farms.
- To observe, assist, or demonstrate the use of farm safety procedures.

Common Essential Learnings Foundational Objectives

- To understand how technology influences occupational roles within pork production and affects the work site (e.g., occupational health, safety, etc.). (TL)
- To explore the consequences which individual actions have for others in concrete situations. (PSVS)

Learning Objectives	Notes
18.1 To identify potential farm hazards.	<p>Have a farm safety specialist talk to the students about general farm safety. Use site visitations and have students identify potential hazards and precautionary measures. Explain why these areas need cautionary attention.</p> <p>Contact Saskatchewan Labour, Prevention Services Branch, (787-8399 or 1-800-567-7233) for more information.</p>
18.2 To describe the use of safety guards, shields, and other safety devices used on farm equipment.	<p>Demonstrate a safety walk around all machinery and other devices to check for the placement and installment of safety devices. Point out the use of safety guards, shields and other safety devices used on farm equipment. Have students demonstrate the ability to locate, read, and comprehend the warning messages on the farm equipment.</p> <p>Involve students in a discussion on farm safety around pigs and specialized equipment.</p>

Learning Objectives

Notes

Student Reference Manual: Have students prepare a safety checklist and inspection to be used on a routine basis in a swine barn.

- 18.3 To describe the kind of proper clothing and protective gear necessary to observe farm safety.

Discuss the kind of clothing, footwear, gloves, glasses, and breathing and ear devices necessary to work in a swine barn or when operating farm machinery. Identify the farm jobs or situations that warrant these precautionary measures.

- 18.4 To distinguish between a safe practice and an unsafe practice when using a number of manual and power tools as well as lifting equipment such as jacks and winches.

Manual and power tools as well as lifting equipment (jacks and winches) are used by all production sectors. Often, students do not recognize that these power tools and lifting equipment can be potentially dangerous. Have students examine the safety hazards associated with these kinds of small tools, jacks or winches.

- 18.5 To identify potential fire hazards and prevention procedures on farms.

Fires on farms can be caused by a variety of sources. Have students list the various fire hazards on farms. Have students describe fire prevention on farms and investigate various types of fire equipment.

Student Reference Manual: Have students prepare a list and description of the various types of fire extinguishers.

- 18.6 To know when and how to use basic First Aid.

Basic First Aid is an essential skill on farms. Students would benefit from taking First Aid courses. Invite a practical nurse or St. John's Ambulance personnel to instruct students in basic First Aid such as cuts, burns, sprains, and breaks. Students should be familiarized with emergency procedures for police, ambulance and firehall.

Student Reference Manual: Have students prepare a list of basic First Aid procedures.

Module 19: Communications (Core)

Suggested Time: 3-4 hours

Level: Intermediate

Prerequisite: None

Module Overview

Effective oral and written communication skills are important skills in all areas of pork production. Throughout the course, students should be encouraged to develop and use effective verbal and written communication skills. An important component of effective communication is the use of appropriate industry language including accurate technical terms. Teachers may wish to have students establish vocabulary lists.

Foundational Objectives

- To develop effective oral and written communication skills.
- To observe, assist, or demonstrate effective communication skills.

Common Essential Learnings Foundational Objectives

- To gradually incorporate the vocabulary related to pork production into their talk and writing. (COM)
- To develop skills in using manuals to find and use information. (COM, IL)

Learning Objectives		Notes
19.1	To understand the need for reliable information throughout all activities associated with pork production.	<p>Providing and understanding current and reliable information involves a number of effective oral and written communication skills. Discuss with students the various kinds of communication required in pork production including reading and forwarding messages, reading and interpreting animal health products, calculating feed rations or rates of gain, and interpreting manuals and other types of information.</p> <p>Often, non-verbal communication can interfere with messages. Role play various situations, with students, emphasizing employee/employer interactions.</p>
19.2	To identify the characteristics of effective verbal and written communication.	<p>Effective use of words is very important in making sure that the message is clearly understood. Effective communication depends on:</p> <ul style="list-style-type: none">• choice of words• simple instructions and answers• concise, specific language. <p>In pork production, communication is critical not only to the operation of the farm but also to follow safety procedures. Have students identify the information and communication needs used in a swine barn.</p>

Learning Objectives	Notes
19.3 To develop skills in receiving and passing on messages and important information.	<p>Farmers are continually receiving and passing on information on everything from machinery repairs to livestock market reports. There are specific skills that a student should use when receiving a message that needs to be passed on as well as when giving messages. Many times these messages are verbal (i.e., telephone, face to face) or through electronic communication such as faxes and e-mail.</p> <p>Have students compose and pass on messages and information that might be used on a farm through a variety of ways. Examples include:</p> <ul style="list-style-type: none">• telephone messages with written notes• messages left and retrieved through voice mail or answering machines• messages delivered or received through faxes• face to face messages and information.
19.4 To locate and use specific information contained in a variety of publications.	<p>Pork production makes use of many sources of information. Finding and sorting information is an important skill particularly for technical information including farm equipment maintenance, farrowing information, and animal health products. Provide students with a number of manuals and other technical information. Practice locating, sorting and discussing when to use specific information.</p> <p>Student Reference Manual: Have students prepare a list of useful manuals and publications relating to pork production.</p>

Module 20: Career Exploration (Core)

Suggested Time: 3-4 hours

Level: Intermediate

Prerequisite: None

Module Overview

Students should explore the career options available to them throughout the course on pork production. This module can be used to guide future career and educational plans. It also introduces students to the concept of employability skills.

Foundational Objectives

- To create an awareness of the post-secondary programs, careers, and employment opportunities in pork production.
- To develop a career plan.
- To understand the concept of employability skills.
- To observe, assist, or demonstrate skills in making career decisions and in using employability skills.

Common Essential Learnings Foundational Objectives

- To seek information through a steadily expanding network of options including other libraries, databases, individuals and agencies. (IL)
- To recognize that learning is continuous from birth to death (e.g., life experiences). (IL)

Learning Objectives	Notes
20.1 To develop individual career profiles.	<p>This learning objective is used to help students identify their areas of interest and abilities in pork production. This will enable students to maintain their enthusiasm over the long term as well as act as a positive reinforcement. Ask students to create an inventory of activities and interests.</p> <p>Assist students in identifying their academic and non-academic strengths including their present knowledge base. Encourage students to value their life experiences and their abilities outside of school. Emphasize the importance of relevant experience and expertise.</p> <p>Have students prepare a list of the many kinds of career opportunities in pork production. Have students research career clusters and the range of occupational opportunities related to pork production. Have students investigate various factors before making career choices including:</p> <ul style="list-style-type: none">• description of the work duties• personal qualities an individual must possess to succeed in the career• processes required to become certified within the career or trade• length of education and training

Learning Objectives

Notes

- school locations
- cost of education and upgrading
- trends within the business or career
- worst and best aspects of the job
- starting salary
- opportunities for advancement.

Have students use this information to develop individual career profiles and a statement of educational and career goals particularly related to pork production.

20.2 To identify basic personal and employability skills.

This learning objective is used to reinforce the notion of employability skills in students including:

- teamwork
- punctuality
- personal responsibility
- positive attitude
- co-operation.

Have students provide a description of each of these employability skills. Have students role play situations demonstrating where these skills would come into play.

20.3 To understand and practise time management.

Time management is an important lifelong skill. Have students list the jobs on a particular farm that need to be done on a weekly, monthly, seasonal or yearly basis. Prioritize the jobs and ask students to prepare a time management system.

Have students list their own jobs including schoolwork and extra curricular activities. Have students prioritize and prepare a personal time management system.

Student Reference Manual: Have students prepare a personal time management system.

Module 21: Planning for Pork Production (Core)

Suggested Time: 3-4 hours

Level: Intermediate

Prerequisite: None

Module Overview

This module is used to outline the more advanced types of planning required for pork production.

Foundational Objectives

- To understand more advanced types of planning used in the production of pork.
- To collect and use information related to farm planning.
- To observe, assist, or demonstrate planning skills.

Common Essential Learnings Foundational Objectives

- To distinguish between primary and secondary sources of information. (COM)
- To apply conclusions and generalizations to new situations. (CCT)

Learning Objectives	Notes
21.1 To describe the kinds of plans that are used in pork production.	<p>There are a number of plans used daily, monthly and yearly in pork production. Some of these include:</p> <ul style="list-style-type: none">• financial plans• breeding plans• cash projections• equipment usage records• work schedules. <p>Discuss with students the basics of a plan, what it is used for and how it is developed. Plans are used to assist in the daily, monthly and yearly operation of a swine barn. They are developed using a review of past performance, identifying future goals, suggesting strategies to help achieve the goals, and, including monitoring strategies to see how well the plans work.</p> <p>Describe the more advanced elements of planning. Ask students to apply the basics and provide a brief description using these elements in a plan for pork production. Have students list the kinds of information they would need to complete each of the plans.</p>

Learning Objectives**Notes**

21.2 To develop a plan for the production of pork from farrow to finish.

This activity is used to draw students' attention to some of the factors that producers must consider when making decisions about pork production. At this intermediate level, students should be able to prepare production plans of pork from farrow to finish.

Inform students of the purpose of the plan (i.e., to make good decisions). Have students discuss why it is important.

Students need to consider all the resources that are needed to operate a pork operation. Some of these resources include:

- land features including soil types and water sources/availability
- availability to breeding or feeding stock
- accessibility to markets
- sources of feed and prepared rations
- ability to handle manure
- other environmental considerations.

Have students identify and describe each of the above.

Module 22: Farm Equipment Maintenance and Repair (Core)

Suggested Time: 10-15 hours

Level: Intermediate

Prerequisite: None

Module Overview

Regardless of the type of operation, farm equipment maintenance and repair are routine operations. This module is used to give students an introduction into general maintenance and repair of farm machinery. Farm safety is stressed throughout the module.

Note: In dealing with all modules on farm equipment, teachers should inform students of the dangers and legalities of under-aged drivers operating farm machinery.

Foundational Objectives

- To develop intermediate level skills and abilities in the repair and maintenance of farm machinery and swine barn equipment.
- To develop skills and abilities in the use of hand and power tools which are used to service farm machinery.
- To observe, assist, or demonstrate skills associated with farm equipment maintenance and repair.

Common Essential Learnings Foundational Objective

- To develop an understanding of the precautionary and preventive processes and procedures that students should use in everyday situations. (TL, CCT)

Learning Objectives	Notes
22.1 To develop skills in the processes associated with regular machinery maintenance.	<p>The first step in maintenance of farm machinery is preventive maintenance processes (i.e., checking oil and fuel levels, cleaning radiators, preventing chaff build-up, and monitoring gauges).</p> <p>Explain regular maintenance processes to students. Have students use the manuals of several different kinds of farm equipment to describe preventive practices of the particular machine.</p> <p>Student Reference Manual: Develop a checklist of preventive maintenance procedures for each piece of pork production equipment.</p>
22.2 To identify and describe a variety of different types of tools (power and manual).	<p>On a farm operation, there are a number of screwdrivers, wrenches, and tools used in the daily maintenance and operation of farm machinery such as the daily maintenance of the machinery, daily routine checkups of pulleys, or adapting the machinery to different uses.</p>

Learning Objectives

Notes

Each tool has a distinct operational procedure. Have students describe how to use a variety of common farm tools. Students should examine and demonstrate the standards illustrated in the operator's manual of each tool.

Have students determine the different types and sizes of wrenches (manual and power) that best suit the job that the wrench is designed to achieve.

Demonstrate that the correct selection and use of the specific tool to fit the correct screw or bolt is very important to prevent damage to the tool, bolt or screw.

Distinguish between a safe practice and an unsafe practice when using specific manual and power tools.

- 22.3 To identify and describe the characteristics of the common farm mechanical, hydraulic, and hand jacks and winches.

In order to maintain machinery, it is often necessary to hoist or elevate machinery, parts of machinery, or other objects while working around the farm. There are a number of different ways to hoist an object depending on its structure. It is important for students to be aware of the weight range, strength, and capacity of the jack and the weight and size of the item being lifted.

Have students compare and contrast the uses and efficiencies of the direct vertical, automotive, floor type, and any other lift. Identify the type of lift that is best suited for each job.

Student Reference Manual: Have students prepare a summary of the type of common mechanical, hydraulic and hand jacks and winches.

- 22.4 To identify the dangers and hazards associated with common lifting equipment.

Overloading, tipping of the jack, and damaged or worn equipment can be just a few of the hazards when using lifting equipment. Select and illustrate the dangers and hazards that are associated with common lifting equipment.

Demonstrate the correct operating procedures in using the jack or hoisting equipment in a safe and efficient manner.

Module 23: Reproduction (Core)

Suggested Time: 5-8 hours

Level: Intermediate

Prerequisite: None

Module Overview

This module provides students with information on the reproduction of pigs including sow and boar management.

Foundational Objectives

- To develop an awareness of pig reproduction.
- To understand the physical differences of pigs according to gender and age.
- To observe, assist, or demonstrate knowledge of pork reproduction.

Common Essential Learnings Foundational Objectives

- To make notes and organize with a system such as index cards or a database. (COM)
- To generate, classify and explore reasons or rules underlying categories. (CCT)

Learning Objectives		Notes
23.1	To describe the reproductive systems of boars, sows and gilts.	<p>Locate diagrams of the reproductive system of boars and gilts. Use diagrams to indicate the major parts of the reproduction system of male and female pigs.</p> <p>Investigate the age at which male and female pigs are mature enough for breeding.</p> <p>Student Reference Manual: Have students find or produce diagrams indicating the major reproductive systems of male and female pigs.</p>

Module 24: Feeds and Feeding Systems (Core)

Suggested Time: 5-8 hours

Level: Intermediate

Prerequisite: None

Module Overview

This module enhances students' knowledge of the feeding and feeding systems used for the production of pork. The module begins with a review of the nutritional requirements of pigs. Students should refer to the information gathered in their Student Reference Manual from Level 10 to assist with the review.

Foundational Objectives

- To develop an understanding of the feeds and feeding systems used for the production of pork.
- To observe, assist, or demonstrate an understanding of feeds and feeding systems used for pork production.

Common Essential Learnings Foundational Objectives

- To distinguish between quantitative situations where precision is required and those where approximations are acceptable. (NUM)
- To distinguish between primary and secondary sources of information. (COM)

Learning Objectives	Notes
24.1 To review the nutritional requirements of pigs.	<p>Have students review or investigate the particular nutritional requirements of the various ages, gender and type of pigs.</p> <p>Review or prepare charts of feed requirements for the following classes of pigs:</p> <ul style="list-style-type: none">• suckling pigs (sow's milk)• young piglets• weaned pigs• growing-finishing pigs• pre-breeding finishing of gilts• pregnant sows• farrowing sows• lactating sows• boars.
24.2 To become familiar with the common types of feeding systems.	<p>Feed is delivered to pigs through feeding systems which range from simple feed carts to computerized feeding systems.</p> <p>Tour a swine barn or pork operation with the producer or farmer-trainer.</p> <p>Student Reference Manual: Have students make notes as they tour through the barn or pork operation.</p>

Learning Objectives

Notes

24.3 To develop skills in maintaining and operating a mechanical feed delivery system.

Mechanized feeding systems require the following steps:

- obtain direction from the barn manager or supervisor
- refer to specific operations as indicated by the manufacturer's instructions
- start the system
- monitor and check the system to see that feeders are being filled
- record feed amounts and report any problems to supervisors
- check that the system shuts down
- check levels of feed.

24.4 To describe the routine maintenance of feeding systems.

Have students demonstrate maintenance of the systems including:

- adequate tensions on chain conveyors
- check to make sure that feed delivery tubes are in the self-feeders
- adjust drive belt tension
- check auger bearings
- lubricate as required.

Student Reference Manual: Have students prepare a checklist of operating procedures and maintenance checks.

Module 25: Sanitation Practices for Swine Production (Core)

Suggested Time: 5-8 hours

Level: Intermediate

Prerequisite: None

Module Overview

A regular and well-managed routine of cleaning helps maintain or enhance productivity. Regular sanitation activities help control flies and rodents. This module explores cleaning and servicing routines inside and outside pork facilities and equipment, including feeding and watering systems.

Foundational Objectives

- To understand the duties and significance of sanitation practices in pork production.
- To observe, assist, or demonstrate routine sanitation practices.

Common Essential Learnings Foundational Objective

- To recognize the importance of taking the responsibility for maintaining routines. (PSVS)

Learning Objectives	Notes
25.1 To describe the areas to be included in the cleaning routine.	<p>Identify to students the importance of regular cleaning. Indicate that these routine activities are some of the best preventive measures to control flies as well as rats and mice.</p> <p>Familiarize students with inside and outside livestock facilities and related equipment. Indicate the cleaning requirements and routines for each area including:</p> <ul style="list-style-type: none">• pens• feed storage areas• feeding systems including feeders• watering systems including waterers• handling areas. <p>Student Reference Manual: Have students list and describe inside and outside areas that require routine cleaning.</p>
25.2 To use farm safety practices in the cleaning facilities and equipment.	<p>Emphasize the need for students to use farm safety practices at all times in order to prevent injury to workers and to pigs.</p> <p>Students should demonstrate their ability to consider and use appropriate practices when cleaning facilities and equipment.</p> <p>Indicate the need to clean brooms, shovels and boots on a regular basis. Clean overalls should be used each day.</p> <p>Student Reference Manual: Develop a checklist of cleaning routines for inside and outside livestock facilities and equipment. Indicate whether each is part of daily, weekly, or monthly cleaning routines. Include a list of the cleaning equipment used.</p>

Learning Objectives**Notes**

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| 25.3 | To become familiar with cleaning agents, disinfectants, and chemicals. | Familiarize students with the cleaning agents and areas which require disinfectants or more thorough cleaning. |
|------|--|--|

Module 26: Waste Removal (Core)

Suggested Time: 5-7 hours

Level: Intermediate

Prerequisite: None

Module Overview

This module develops knowledge and skills in waste removal inside and outside swine barns and explores environmentally sound practices. As in all situations on the farm, students should be thoroughly aware of the dangers associated with waste disposal. Students must demonstrate safe practices and procedures at all times.

Foundational Objectives

- To describe safe practices when removing waste from pork production facilities.
- To observe, assist with or demonstrate safe waste removal practices.

Common Essential Learnings Foundational Objective

- To reflect critically on safe and proper methods of waste removal from swine barns that demonstrate awareness of environmental issues as well as care for pigs and facilities. (CCT, IL, TL)

Learning Objectives	Notes
26.1 To become familiar with the dangers of manure gas.	<p>Manure gas is emitted from manure stored in liquid manure pits. Students should be thoroughly familiar with the dangers of manure gas which are caused from ventilation failure or manure pit agitation.</p> <p>Make sure that students are well informed of the dangers of manure gas. Recommend that students use the buddy system when working near or around manure storage areas.</p>
26.2 To become familiar with the manure removal system used in the particular pork operation.	<p>Describe the manure removal system used. Indicate the areas and components which make up the system.</p> <p>Demonstrate to students how to use the system. Demonstrate to students the safe operation of manure removal equipment. After observing, have students describe or demonstrate the safe operation of cleaning equipment. Students should be able to identify and be knowledgeable about the dangerous components and hazards of operating these types of equipment.</p> <p>Have students describe and outline the components of the equipment that require specialized training before an operator is allowed to work with the equipment. Ensure that students demonstrate precautionary steps to be taken to eliminate the possibility of dangerous situations occurring.</p> <p>If straw bedding is used, indicate to students how to handle the manure.</p>

Learning Objectives

Notes

Describe to students the areas which require removal of manure, or which have the potential for manure to pile up and interfere with the manure removal system.

Student Reference Manual: Have students develop a checklist of manure removal procedures to be performed on a regular basis.

26.3 To develop an awareness of the environmental issues that are associated with waste disposal. (CCT, COM)

Discuss and demonstrate the ways in which to properly dispose of waste. Indicate the problems that can occur in the environment when waste is handled improperly.

Module 27: Feeding Equipment (Optional)

Suggested Time: 3-5 hours

Level: Intermediate

Prerequisite: None

Module Overview

This module enables students to develop skills in the routine operation of feeding equipment used for pigs.

Foundational Objective

- To observe, assist, or demonstrate the ability to operating feeding equipment.

Common Essential Learnings Foundational Objective

- To explore the evolution of technological developments within the feedlot industry. (CCT)

Learning Objectives	Notes
27.1 To develop the ability to operate feeding equipment.	<p>Show students the types of feeding equipment used on the farm including the various components of the system and points/places which require monitoring.</p> <p>Have students describe and outline the components of the equipment. Ensure that students are thoroughly knowledgeable about the operation of any piece of equipment. Students should always demonstrate safe practices and procedures.</p> <p>Student Reference Manual: Have students develop a list of safety precautions and appropriate behaviours to practice to prevent injury to workers or animals when using feeding system equipment and facilities.</p>

Module 28: Swine Barn Protocol (Optional)

Suggested Time: 3-5 hours

Level: Intermediate

Prerequisite: None

Module Overview

A barn entry protocol is one of the most fundamental preventive measures that swine barn operators can use to control the introduction and spread of disease. While it is the duty of all workers and managers to enforce the protocol, students should be aware but not charged with the responsibility to ensure that it is obeyed. It is essential that all employees know and apply the barn's protocol.

Foundational Objectives

- To develop an understanding of swine barn protocol.
- To observe, assist, or demonstrate swine barn protocol procedures.

Common Essential Learnings Foundational Objectives

- To develop basic skills in observing and communicating swine barn protocol. (CCT, COM)
- To recognize the importance of taking the responsibility for maintaining routines. (PSVS)

Learning Objectives	Notes
28.1 To understand the significance of adhering to a swine barn protocol.	Swine barn protocols are rules and regulations established by the owners of the barn. They are used to protect the health of the herd. Some barn protocols include limiting access to only authorized individuals. Discuss the reasons for a swine barn protocol. Discuss the reasons why protocols vary from barn to barn.
28.2 To know and use the swine barn's protocol.	Most barns have simple rules although many have more stringent rules and regulations. Students should become thoroughly familiar with these rules and regulations.
Student Reference Manual: Have students make a checklist of the swine barn protocol.	

Module 29: Veterinary Drugs (Core)

Suggested Time: 3-5 hours

Level: Intermediate

Prerequisite: None

Module Overview

This module is used to focus students' attention on the use, administration and storage of veterinary drugs. All veterinary drugs should be administered carefully and only under the direction of a veterinarian. Proper storage and attention to the shelf life of drugs is critical to the efficacy of vaccines and medications.

Foundational Objectives

- To understand the need for careful use, administration and storage of veterinary drugs.
- To observe, assist farmer-trainers, or demonstrate proper use, administration and storage of veterinary drugs.

Common Essential Learnings Foundational Objective

- To determine the most appropriate degree of precision for a particular task. (NUM)

Learning Objectives	Notes
29.1 To manage a drug and medication program in a swine barn or pork operation.	<p>It is essential that pork producers manage a drug and medication program based on knowledge of how to store, handle, and dispose of medications. The operator should be able to identify potential contamination hazards and describe the techniques to minimize problems. An important management tool is a well-designed recordkeeping system for use and administration of medication supply.</p> <p>Veterinarians are key resources for helping students understand the care and attention needed to handle, store and administer veterinary drugs.</p> <p>Student Reference Manual: Have students describe the handling, storage, and disposal procedures for each type of medication or drug that is required in a pork operation. Students should identify the potential contamination hazards that can occur and describe the best techniques to avoid any contamination to the medications.</p> <p>Have students design a recordkeeping system that is efficient in maintaining the health of the pigs. Students should also develop an inventory system for the drugs and medications to ensure that the supplies are adequate.</p> <p>Have students prepare a recordkeeping system for veterinary drugs used in pork production.</p>

Module 30: Farrowing Procedures (Optional)

Suggested Time: 5-10 hours

Level: Intermediate

Prerequisite: None

Module Overview

This module is used to introduce students to farrowing procedures including routine and optimal pre- and post-farrowing procedures necessary to provide safety for sows and piglets. The module also includes pre-partum, partum and post-partum care of sows and piglets.

Foundational Objectives

- To understand sow and piglet care during farrowing.
- To observe, assist with or demonstrate skills in farrowing.

Common Essential Learnings Foundational Objectives

- To interview persons with prearranged questions to acquire information. (COM)
- To select learning methods appropriate for task and own learning style. (IL)

Learning Objectives	Notes
30.1 To identify the proper care and nutrition for bred sows.	<p>The profit for a pork operation is dependent on the number of piglets produced in a year. Producers must take a number of precautionary measures to ensure successful farrowing including high farrowing rates and healthy animals. One of the most important factors for successful farrowing is the condition of the sow at the time of birth.</p> <p>After discussing pig nutrition with a farmer-trainer or a veterinarian, have students describe a program that would allow bred sows to have optimal health during the pregnancy. Students should include in the description the type of feed, nutrients, and general care required during gestation and farrowing.</p>
30.2 To describe the process of farrowing.	<p>Have a veterinarian explain the stages of labour and describe the process of farrowing. Include in the discussion common farrowing problems or conditions that require special attention or assistance. Students should prepare a checklist of necessary equipment and procedures including the steps required in case of problems.</p> <p>Student Reference Manual: Have students collect necessary information about farrowing procedures and develop a list of necessary equipment, drugs and nutritional supplements to have on hand when farrowing.</p>

Learning Objectives	Notes
30.3 To demonstrate the post-partum care of sows and piglets.	<p>Post-partum care is required for both sows and piglets. Have students identify and prepare a summary of procedures (including vaccinations) required for sows and piglets.</p> <p>Recordkeeping and identifying litters of piglets and their mothers is very useful in giving post-partum care to sows and piglets as well as in assisting with production records.</p> <p>Discuss with students why recordkeeping is important during farrowing.</p> <p>Student Reference Manual: Have students develop a recordkeeping system of recording sows and piglets during farrowing.</p>

Module 31: Recordkeeping for a Pork Operation (Optional)

Suggested Time: 4-6 hours

Level: Intermediate

Prerequisite: None

Module Overview

Pork producers use a variety of records in their daily operations including records of farrowing, weaning weights, boars, veterinary records and feed consumption. Purebred breeders in particular depend extensively on accurate records. This module expands students' skills and abilities in preparing and using livestock records

Foundational Objectives

- To understand the importance of livestock records.
- To develop the ability to plan livestock records.
- To observe, assist, or demonstrate skills in recordkeeping for a pork operation.

Common Essential Learnings Foundational Objectives

- To recognize the importance of taking the responsibility for maintaining routines. (PSVS)
- To collect and organize quantitative information into a list, table, graph or chart and analyze this information to determine a conclusion. (NUM)

Learning Objectives	Notes
31.1 To understand the importance of livestock recordkeeping.	Have students identify livestock records and how they might be used. Some examples include: <ul style="list-style-type: none">• farrowing records• sales, prices, and purchasing records• weaning weight and rate of gain records• sow productivity and fertility of boars records• purebred breeding dates records• feeding rates records• type of feed records.
31.2 To develop various livestock records.	Have students design livestock records for a particular pork operation. Use and application of computer software and spreadsheets are encouraged.

Student Reference Manual: Have students develop a livestock recordkeeping plan for a particular pork operation.

Resources

Agriculture Canada (1992). *Practical guide to swine breeding*. 1866/E

Prairie Swine Centre. Miscellaneous documents.

Saskatchewan Agriculture, Food and Rural Revitalization. Miscellaneous documents. Resources can be ordered from the Publication Distribution Centre Order Desk by telephone: (306) 721-4330, by fax: (306) 721-4626, or by e-mail: Valb.pad@sk.sympatico.ca. Saskatchewan Agriculture, Food and Rural Revitalization's web site address is <http://www.agr.gov.sk.ca>.

Saskatchewan Institute of Applied Science and Technology, Wascana Institute (1997). *Pork production technician*. Regina SK: Author.

References

Battle River Regional Division #31. (1997). *Green certificate program: Handbook for administrations and school coordinators*. Camrose AB.

Saskatchewan Education. (1991). *Instructional approaches: A framework for professional practice*. Regina SK: Author.

Saskatchewan Education. (1991). *Student evaluation: A teacher handbook*. Regina SK: Author.

Saskatchewan Institute of Applied Science and Technology, Wascana Institute. (1997). *Pork production technician*. Regina SK: Author.

Appendix A: Training Plans for Pork Production 10

Module 1: Saskatchewan's Pork Industry (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Describes and understands Saskatchewan's pork industry					
Describes and understands how the marketing system works for pigs					
Locates and interprets current market information					
Identifies and describes the various kinds of markets used in pork production. Lists the advantages and disadvantages of each					
ADDITIONAL COMMENTS:					

Module 2: Farm Safety (Core)**Student's Name** _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A – Assisted O – Observed D – Demonstrated			Completion Date	Comments
	A	O	D		
Identifies the major types of potential farm hazards: <ul style="list-style-type: none">• moving vehicles• speed and power of machines and moving parts• center of gravity (roll over)• working with groups of people around machinery• clothing, gloves, and footwear• rotation parts (PTO, belts, chains, etc.)• hot surfaces and fluids• high pressure hydraulics• other _____					
Demonstrates personal safety habits when working around and operating farm machinery and livestock					
Identifies and describes situations which warrant: <ul style="list-style-type: none">• use of ear plugs• eye protection• dust protection for breathing• location and accessibility of fire and First Aid equipment					
Maintains the tools and shop in a clean and safe condition					
Identifies safety guards, shields, safety devices and warning signs used on farm equipment					

Module 2: Farm Safety (Core)

Learning Objectives	√ if Student: A – Assisted O – Observed D – Demonstrated			Completion Date	Comments
	A	O	D		
Describes proper clothing and protective gear					
Demonstrates the safety hazards associated with small tools, jacks, winches, and other lifting equipment					
Describes three basic components of a fire extinguisher Describes the three classes or types of fire Lists the classes of fire possible in: <ul style="list-style-type: none"> • a truck or tractor • a farm shop • other potential areas 					
Reads and interprets the labels on a fire extinguisher					
Selects the proper extinguisher for the type of fire					
Performs basic emergency First Aid procedures to: <ul style="list-style-type: none"> • restore breathing • choking victims • bleeding cases • victims of shock • other _____ 					
ADDITIONAL COMMENTS:					

Module 3: Communications (Core)**Student's Name** _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Demonstrates the following communication skills: <ul style="list-style-type: none">• reading and forwarding messages• reading and interpreting charts• interpreting manuals• other _____					
Demonstrates effective communication through: <ul style="list-style-type: none">• choice of words• simple instructions and answers• concise, specific language					
Composes and passes on messages and information through: <ul style="list-style-type: none">• telephone messages on written notes• messages left and retrieved through voice mail and answering machines• messages delivered or received through faxes• face to face messages and information					
Locates, sorts, and summarizes specific information for manuals and a variety of publications					
ADDITIONAL COMMENTS: 					

Module 4: Career Exploration (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Develops an individual career profile					
Identifies basic personal and employability skills					
Prepares a personal time management system					
ADDITIONAL COMMENTS:					

Module 5: Planning for Pork Production (Core)**Student's Name** _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Describes the kinds of plans used in pork production					
ADDITIONAL COMMENTS:					

Module 6: Farm Equipment Maintenance and Repair (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Demonstrates preventative maintenance: <ul style="list-style-type: none"> • checking oil • checking fuel levels • cleaning radiators • monitoring gauges • removing dust build-up 					
Interprets manuals of farm equipment					
Identifies and describes the operational procedure and safety hazards for: <ul style="list-style-type: none"> • screwdrivers • wrenches • pliers and cutters • hammers, mauls, chisels and punches • other _____ 					
Identifies and describes the characteristics of and the safety hazards associated with: <ul style="list-style-type: none"> • mechanical jacks and winches • hand jacks and winches • hydraulic lifting equipment • other lifting devices 					
ADDITIONAL COMMENTS: 					

Module 6: Farm Equipment Maintenance and Repair (Core)

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Identifies the transportation regulations for moving farm equipment on public roads in terms of: <ul style="list-style-type: none"> • licensing • insurance • operator's qualifications • types of roads • other _____ 					
Describes the transportation regulations for the equipment in terms of: <ul style="list-style-type: none"> • width, height and length requirements • lighting • slow moving signs • clear visibility • seasonal restrictions • other _____ 					
Understands the need for emergency equipment					
Describes examples of tools and emergency equipment for farm equipment in transport					
ADDITIONAL COMMENTS:					

Module 7: Swine Anatomy and Physiology (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Describes and states the function of the physiological characteristics of pork related to: <ul style="list-style-type: none"> body structure digestive systems reproductive systems age and its relation to size, frame and weight mammary system other _____ 					
Identifies the sexes by proper name and distinguishing characteristics					
Identifies types of breeds of pork					
States characteristics of each breed and each breed's uniqueness or special characteristics					
ADDITIONAL COMMENTS:					

Module 8: Basic Handling of Pork (Core)**Student's Name** _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Understands the causes and affects of stress on pigs					
Demonstrates a working knowledge of vision, foot structure and hearing of pigs					
Identifies the proper techniques to reduce noise and stress.					
Describes situations which can hurt, cause stress or excite pigs					
Identifies ways to reduce noise and stress in swine barns					
Identifies situations which can harm pigs					
ADDITIONAL COMMENTS: 					

Module 9: Pork Nutrition (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
States the importance of nutrition for pigs					
In a feeding plan, states the importance of: <ul style="list-style-type: none"> different rations/proportions and components for different herd groupings water quality types of feeding equipment 					
Describes the basic nutritional requirements of pigs					
Develops the ability to read and interpret feed tags					
Calculates feed rations					
ADDITIONAL COMMENTS:					

Module 10: Feeding Equipment (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Identifies various components of a feeding system					
Identifies regular maintenance procedures including: <ul style="list-style-type: none"> checking bearings greasing bearings replacing worn parts 					
Demonstrates safe operation and maintenance of equipment including: <ul style="list-style-type: none"> augers front-end loaders conveyors platform scales 					
Demonstrates the operation of feed milling or processing equipment					
ADDITIONAL COMMENTS: 					

Module 11: Pork Health Care (Optional)**Student's Name** _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Describes the concept and procedures associated with basic herd health					
Describes procedures of maintenance and treatment					
Prepares a checklist of preventative measures and practices of herd health					
Interprets labels of drug and medication products					
Describes the basic nature and the use of the different drug products					
Determines the dosage and correct administration style					
Describes the proper storage procedures for further use					
Describes the possible contamination hazards of drugs and medications					
Explains the administration style of drugs and medications with: <ul style="list-style-type: none">• proper equipment• restraining procedures• economic considerations• other _____					

Module 11: Pork Health Care (Optional)

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Describes the contents of an animal first aid kit					
Demonstrates the ability to make an on-farm diagnosis of various ailments					
Develops a plan to analyze animal value versus cost of animal					
Describes what to watch for in the animal's response to the different treatment					
Identifies the common diseases and disorders by recognizing symptoms of: <ul style="list-style-type: none"> • respiratory rate • skin conditions • eye and nasal discharge/weeping • injuries to feet and legs • digestive systems • other _____ 					
ADDITIONAL COMMENTS:					

Module 12: Swine Barn Routine (Optional)**Student's Name** _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Demonstrates skills in daily tasks including: <ul style="list-style-type: none">• routine maintenance• cleaning• heat detection or breeding• treating sick or injured animals• checking temperature and ventilation• processing piglets• updating records					
Demonstrates skills in weekly tasks including: <ul style="list-style-type: none">• routine preventive maintenance• processing or weaning pigs• inducing farrowing• ordering feed• weighing pigs• equipment checks• vaccinations and pregnancy checks• other _____					
Demonstrates an understanding of monthly, seasonal or annual tasks including: <ul style="list-style-type: none">• emptying manure storage• maintaining the ventilation system• building and equipment service and maintenance• repairing pens and farrowing crates• maintaining heating equipment• servicing watering and manure handling equipment• cleaning drug cabinets• checking inventory drug and medical supplies					

Module 13: Swine Barn Watering Systems (Optional)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Demonstrates an understanding of the water need of pigs					
Describes a water filtration system					
Describes water supply system including: <ul style="list-style-type: none"> pressure system controls distribution pipe 					
ADDITIONAL COMMENTS:					

Module 14: Recordkeeping in a Pork Operation

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Identifies the importance of recordkeeping					
Designs and maintains accurate records for: <ul style="list-style-type: none"> • daily activities • inventory • feeding charts • sick or injured animals • _____ 					
ADDITIONAL COMMENTS: 					

Appendix B: Training Plans for Pork Production 20

Module 17: Marketing (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Describes the marketing system for Saskatchewan					
Describes the factors on which producers are paid for hogs					
Describes how to select finished pigs for market					
Describes and demonstrates the ability to transport hogs					
ADDITIONAL COMMENTS:					

Module 18: Farm Safety (Core)**Student's Name** _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Demonstrates a safety walk around all machinery and other devices used in pork production					
Demonstrates the ability to locate, read and comprehend messages on the farm equipment					
Identifies and describes situations which warrant: <ul style="list-style-type: none">• use of ear plugs• eye protection• dust protection for breathing• location and accessibility of fire and First Aid equipment					
Maintains the tools and shop in a clean and safe condition					
Identifies safety guards, shields, safety devices and warning signs used on farm equipment					
Describes proper clothing, and protective gear					
Demonstrates the safety hazards associated with small tools, jacks, winches, and other lifting equipment					

Module 18: Farm Safety (Core)

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Describes three components of a fire extinguisher					
Describes the three classes or types of fire					
Lists the classes of fire possible in: <ul style="list-style-type: none"> a truck or tractor a farm shop other potential areas 					
Reads and interprets the labels on a fire extinguisher					
Selects the proper extinguisher for the type of fire					
Performs basic emergency first aid procedures to: <ul style="list-style-type: none"> restore breathing choking victims bleeding cases victims of shock other _____ 					
ADDITIONAL COMMENTS:					

Module 19: Communications (Core)**Student's Name** _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Demonstrates the following communication skills used in pork production: <ul style="list-style-type: none">• reading and forwarding messages• reading and interpreting charts• interpreting manuals• other _____					
Demonstrates effective communication through: <ul style="list-style-type: none">• choice of words• simple instructions and answers• concise, specific language					
Composes and passes on messages and information through: <ul style="list-style-type: none">• telephone messages on written notes• messages left and retrieved through voice mail and answering machines• messages delivered or received through faxes• face to face messages and information					
Locates, sorts, and summarizes specific information from manuals and a variety of publications					
ADDITIONAL COMMENTS: 					

Module 20: Career Exploration (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Develops an individual career profile					
Identifies basic personal and employability skills					
Prepares a personal time management system					
ADDITIONAL COMMENTS: 					

Module 21: Planning for Pork Production (Core)**Student's Name** _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Describes the kinds of plans used in pork production					
Demonstrates the ability to plan for pork production from farrow to finish					
ADDITIONAL COMMENTS:					

Module 22: Farm Equipment Maintenance and Repair (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Demonstrates preventive maintenance including: <ul style="list-style-type: none"> • checking oil • checking fuel levels • cleaning radiators • monitoring gauges • removing dust build-up 					
Identifies and describes the use of a variety of tools					
Identifies and describes the operational procedure and safety hazards for: <ul style="list-style-type: none"> • screwdrivers • wrenches • pliers and cutters • hammers, mauls, chisels and punches • other _____ 					
Identifies and describes the characteristics of and the safety hazards associated with: <ul style="list-style-type: none"> • mechanical jacks and winches • hand jacks and winches • hydraulic lifting equipment • other lifting devices 					
ADDITIONAL COMMENTS: 					

Module 23: Reproduction (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Describes the reproductive system of boars, sows and gilts					
Identifies the typical behaviour characteristics of gilts or sows in estrous					
Demonstrates an understanding of the management of breeding boars					
Demonstrates the ability to maintain accurate records of breeding dates					
ADDITIONAL COMMENTS:					

Module 24: Feeds and Feeding Systems (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Describes the nutritional requirements of pigs					
Identifies the common types of feeding systems					
Demonstrates skills in maintaining and operating a mechanical feed delivery system: <ul style="list-style-type: none"> • follows directions from barn manager • refers to instructions • starts, monitors and checks system • checks that the system shuts down properly • checks levels of feed 					
Demonstrates the ability to perform routine maintenance of feeding system including: <ul style="list-style-type: none"> • chains and feed delivery tubes • belt tension • auger bearings and lubrication points 					
ADDITIONAL COMMENTS:					

Module 25: Sanitation Practices for Swine Production (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Describes the areas to be included in routine cleaning					
Demonstrates farm safety practices when cleaning facilities and equipment					
Identifies cleaning agents, disinfectants and chemicals used for cleaning and sanitation					
ADDITIONAL COMMENTS: 					

Module 26: Waste Removal (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Demonstrates an understanding of the dangers of manure gas					
Demonstrates an understanding of the operation of the manure removal system					
Describes and demonstrates manure removal procedures					
ADDITIONAL COMMENTS: 					

Module 27: Feeding Equipment (Optional)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Identifies various components of a feeding system					
Identifies regular maintenance procedures including: <ul style="list-style-type: none"> checking bearings greasing bearings replacing worn parts 					
Demonstrates safe operation and maintenance of equipment including: <ul style="list-style-type: none"> augers front-end loaders conveyors platform scales 					
Demonstrates the operation of feed milling or processing equipment					
ADDITIONAL COMMENTS: 					

Module 28: Swine Barn Protocol (Optional)**Student's Name** _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Demonstrates an understanding of the need for a swine barn protocol					
Knows and adheres to swine barn protocol					
ADDITIONAL COMMENTS:					

Module 29: Veterinary Drugs (Core)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Demonstrates skills in managing a drug and medication program including: <ul style="list-style-type: none"> • storing drugs • handling and disposal of medications • using a recordkeeping system • updating inventory 					
ADDITIONAL COMMENTS:					

Module 30: Farrowing Procedures (Optional)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Identifies the proper care and nutrition for bred sows					
Describes the process of farrowing					
Describes post-partum care of sows and piglets					
Demonstrates the ability to keep farrowing records					

ADDITIONAL COMMENTS:

Module 31: Recordkeeping for a Pork Operation (Optional)

Student's Name _____ **Farmer-Trainer** _____

Learning Objectives	√ if Student: A - Assisted O - Observed D - Demonstrated			Completion Date	Comments
	A	O	D		
Identifies the importance of recordkeeping					
Designs and maintains accurate records for: <ul style="list-style-type: none"> • daily activities • inventory • feeding charts • sick or injured animals • _____ 					

ADDITIONAL COMMENTS:
