

Canadian Small-Scale Pig Farming Manual

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Canadian Association of Swine Veterinarians
Association Canadienne des Vétérinaires Porcins

Canada

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Acknowledgements

The Canadian Small-Scale Pig Farming Manual is designed for people who are interested in raising pigs on a small-scale basis. Maybe you are new to raising pigs. Perhaps you have been at it for a while and still have questions about different aspects of pig management. The objective of the Manual is to provide you with information in key areas to help you raise pigs successfully and responsibly. The Manual builds on the experience of small-scale pig farmers who have learned by doing. They have spent a great deal of time and resources fine-tuning their farms to raise their pigs successfully.

Content was compiled from various sources of information, most notably:

- ▶ Small Lot Pork Producer Management & Production Manual – BC Pork – 2020
- ▶ Pig Production in Alberta: A Guide for Small-Scale Producers – Alberta Pork – 2018
- ▶ Small Scale Pig Production: A Guide for Saskatchewan Farms – Saskatchewan Pork Development Board – 2020
- ▶ Small Scale Pig Production: An Introduction to Small Scale Pig Production in Ontario – Ontario Pork – 2019
- ▶ Introduction to Small Scale Pig Production – Pork Nova Scotia, Perennia Food & Agriculture Inc. – 2016

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Contents

01 Starting Out	7
1.1 Terminology	7
1.2 How Many to Start With	8
1.3 Where to Purchase Pigs	8
1.4 Important Purchasing Questions	8
1.5 Breeds	9
1.6 Supplies and Equipment	10
1.7 Emergency Management	10
02 Legal Requirements	11
2.1 Premises Registration	11
2.2 Animal Identification and Movement Reporting	12
2.3 Code of Practice for the Care and Handling of pigs	13
2.4 Canadian Pork Excellence (CPE)	13
2.5 Environmental Management	13
03 Housing and Management	14
3.1 Shelters	14
3.2 Shelter Requirements	14
3.3 Outdoor Management	15
3.4 Fencing	16
3.5 Space Allowance	17
3.6 Sunburn Protection (Shade and Wallows)	18
3.7 Handling and Restraint Areas	19
3.8 Hospital Pens	19
3.9 Cleaning and Disinfection	20
04 Pasture Management	21
4.1 Nutrition on Pasture	21
4.2 Pasture Management	22
4.3 Rotational Grazing	22
05 Feed and Water	23
5.1 Feeding Your Pig	24
5.2 Pig Nutrition	24
5.3 Feed Quantity	25
5.4 Feed Safety	27
5.5 Feeders	28
5.6 Water	29

06 Handling	31
6.1 Pig Handling Concepts	31
6.2 Flight Zone	32
6.3 Signs of Stress	33
6.4 Indicators of Distress During Handling	33
6.5 Pig Restraint	33
6.6 Pig Handling Tools	35
07 Reproduction Management	36
7.1 Boar Care	36
7.2 Breeding	36
7.3 Gestation	37
7.4 Farrowing and Lactation Period	38
7.5 Farrowing Complications	42
08 Disease Prevention	43
8.1 Principles	43
8.2 Workflow	43
8.3 Visitors	44
8.4 Feed and Water Sources	44
8.5 Introduction of New Stock	44
8.6 Quarantine	45
8.7 Herd Health	45
8.8 Mortalities	45
8.9 Fences	46
8.10 Cleaning and Maintenance	46
8.11 Rodent Control	46
09 Swine Health and Well-Being	47
9.1 Product Terminology	47
9.2 Signs of Poor Health	47
9.3 Herd Health Protocols	49
9.4 Treatment Program	49
9.5 Medical Supplies and Equipment	49
9.6 Vaccination Guideline	51
9.7 Controlling Parasites	51
9.8 Disease Management	53
9.9 Common Diseases of Outdoor Production	53
9.10 Reportable Swine Diseases in Canada	57
10 Euthanasia and Deadstock	58
10.1 Euthanasia Planning	58
10.2 Deadstock Disposal	61
11 Transport	62
11.1 Fitness for Transport	62
11.2 Identification Tools and Supplies	65
11.3 Loading Facilities	65
12 Marketing and Slaughter	66
12.1 Marketing	66
12.2 Slaughter	68
12.3 Slaughter Plant Biosecurity	69
12.4 Foodborne Disease Risk	69

Provincial Contact List

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BC Ministry of Agriculture, Food and Fisheries
AgriService BC
AgriServiceBC@gov.bc.ca
1-888-221-7141

BC Animal Health Centre
PAHB@gov.bc.ca
1-800-661-9903

SASKATCHEWAN

Saskatchewan Pork Development Board
info@saskpork.com
306-244-7752

Saskatchewan Ministry of Agriculture
www.saskatchewan.ca/government/government-structure/ministries/agriculture
1-866-457-2377

ONTARIO

Ontario Pork
comm@ontariopork.on.ca
1-877-668-7675

Ontario Ministry of Agriculture, Food and Rural Affairs
Agriculture Information Contact Centre
ag.info.omafra@ontario.ca
1-877-424-1300

ALBERTA

Alberta Pork
info@albertapork.com
1-877-247-7675

Government of Alberta
Office of the Chief Provincial Veterinarian
www.alberta.ca/office-of-the-chief-provincial-veterinarian.aspx
780-427-3448

MANITOBA

Manitoba Pork
info@manitobapork.com
204-237-7447

Manitoba Ministry of Agriculture and Resource Development
agriculture@gov.mb.ca
1-844-769-6224

QUEBEC

Les Éleveurs de porcs du Québec
leseleveursdeporcs@leseleveursdeporc.quebec
450 679-0540, poste 8422

MAPAQ
1 888 222-MAPA (1 888 222-6272)
www.mapaq.gouv.qc.ca/fr/Pages/NousJoindre.aspx

NEW BRUNSWICK**NB Pork**

financemanager@porcnbpork.nb.ca
506-458-8051

Government of New Brunswick

Department of Agriculture, Aquaculture and Fisheries
DAAF-MAAP@gnb.ca
506-453-3826

Government of New Brunswick

Veterinary Services
www2.gnb.ca/content/gnb/en/departments/10/agriculture/content/livestock/veterinary_services.html

PRINCE EDWARD ISLAND**PEI Pork**

peipork@eastlink.ca
902-892-4201

Government of PEI

Premises Identification Program
902-368-5654
peipid@gov.pe.ca
www.princeedwardisland.ca/en/information/agriculture-and-fisheries/livestock-and-poultry-premises-identification-pei

Government of PEI

Office of the Provincial Veterinarian
902-370-4923
opv@gov.pe.ca

NOVA SCOTIA**Perennia Food & Agriculture Inc. (Crown Corporation)**

info@perennia.ca
902-678-7722

Pork Nova Scotia

info@porknovascotia.ca
902-895-0581

YUKON**Government of Yukon**

Animal Health Unit
1-800-661-0408 x 5600
animalhealth@gov.yk.ca

Government of Yukon

Agriculture Branch
1-800-661-0408 x 5838
agriculture@gov.yk.ca

01

Starting Out

KEY POINTS

- ▶ Start small. Take time and become comfortable raising a few pigs before expanding your operation.
- ▶ Purchase healthy pigs. Cheap pigs are not always cheap pigs in the end.
- ▶ Select a breed that best suits your operation and goals.
- ▶ Ensure you have the right supplies and equipment on hand.

1.1 TERMINOLOGY

It is important to understand terminology when raising pigs. These are the most commonly used definitions when it comes to raising a pig:

CATEGORY	DESCRIPTION	TYPICAL WEIGHT FOR WHITE PIG
Sow	A mature female that has had at least one litter of piglets.	160 – 300+ kg
Gilt	A young or immature female that typically has not had a litter. However, it also often includes females that have had one litter.	1 – 160 kg
Piglet	A young pig that requires nutrition (milk) from its mother (sow/gilt). Typically less than 8 weeks of age.	1 – 12 kg
Boar	Uncastrated male pig.	1 – 350+ kg
Barrow	A male pig castrated prior to reaching sexual maturity. Typically less than 6-9 months of age.	1 – 135 kg
Weaner	A pig just removed from its mother and proceeds to eat only solid food. This phase typically lasts 7-10 weeks.	10 – 35 kg
Grower	An adolescent pig between a weaner and finisher pig.	35 – 70 kg
Finisher	The final stage of a pig's growth period. Pigs are slaughtered or moved into the breeding herd. Pigs achieve their final weight between 6 – 9 months of age.	70 – 135 kg

Each of the above categories identifies a specific phase of growth in the pig's life cycle based on weight and age. However, time to market weight (slaughter) varies greatly with the breed of pig, your goals for market weight, and the pigs' diet.

1.2 HOW MANY TO START WITH

Start small with two to four weaner pigs, typically purchased in the spring and raised until market weight (late fall). This will give you an opportunity to understand the requirements and commitment required in raising pigs. Once you have become comfortable raising weaner pigs for a couple of seasons, you can build your herd carefully and slowly. Always look for advice from experienced farmers who have been successful in raising pigs.

1.3 WHERE TO PURCHASE PIGS

Pigs should be purchased from reputable suppliers. This can be from local groups, online sources, or breeders. One place to avoid is auction marts, as pigs from multiple sources may be mixed there. It is recommended to buy from a single source herd that has been tested and is free of or vaccinated for common diseases. Purchasing a cheap pig will generally cost you more in the long run due to costs associated with disease, mortality, and slow growth.

Book slaughter space in advance. Ensure you can market your pigs when they get to market weight. Many abattoirs require booking a spot two or more months in advance. Make sure to book ahead, possibly even before buying any pigs. You do not want to end up with unmarketable pigs, especially if you do not have a contingency plan to care for them.








1.4 IMPORTANT PURCHASING QUESTIONS

1. Are they castrated or intact?
2. What breed are they?
3. Did they receive any vaccines, dewormers, or other treatments?
If so, do they have any outstanding drug withdrawal periods?
4. Any health concerns? (Best to consult with your veterinarian, as well as the supplier's veterinarian if they have one.)

It is important to observe the conditions of the farm where you are purchasing pigs. This will give you an opportunity to see how well they were cared for and identify any future potential concerns.

1.5 BREEDS

There are numerous breeds of pigs. However, there are several that may be more suited for production in an outdoor environment. The most common breeds include:

BREED	CHARACTERISTICS
Kunekune 	<ul style="list-style-type: none"> • Small • Hairy • Docile • True pasture pigs <ul style="list-style-type: none"> • Colours range from black and white, to ginger, cream, gold-tip, black, brown, tri-coloured, or any combination of the above.
Berkshire 	<ul style="list-style-type: none"> • Average to large in size • Upright ears • Good disposition • Hardy outside <ul style="list-style-type: none"> • Black with white points (legs, face and tail) and pink skin.
Tamworth 	<ul style="list-style-type: none"> • Thick and coarse hair (moult in summer) • Hardy outside • Work well on pasture • Moderate size <ul style="list-style-type: none"> • Red to ginger colour
Hereford 	<ul style="list-style-type: none"> • Medium to large size • Grow relatively fast • Good disposition • Hardy • Suited for outdoor and indoor systems <ul style="list-style-type: none"> • Red-brown and white colouration
Hampshire 	<ul style="list-style-type: none"> • Medium to large size • Good temperament • Suited for outdoor and indoor systems • Good growth <ul style="list-style-type: none"> • Black body, with a white band around the middle, covering the front legs.
Red Wattle 	<ul style="list-style-type: none"> • Medium to large size • Grow relatively fast • Good temperament • Hardy • Work well on pasture <ul style="list-style-type: none"> • Red-brown colouration
Mangalitsa/ Mangalica 	<ul style="list-style-type: none"> • Thick and curly hair • Hardy outside • Work well on pasture • Medium to large size <ul style="list-style-type: none"> • Colours range from blond, to red-brown, to a combination of black and blond
White pigs 	<ul style="list-style-type: none"> • Large size • Large litters • Can be used for cross breeding • Grow quickly <ul style="list-style-type: none"> • White to pink in colour

1.6 SUPPLIES AND EQUIPMENT

- ▶ Being prepared by having essential supplies on hand for most situations that will occur on a daily, weekly, or monthly basis will help you make effective and timely decisions which will benefit you and your pigs. Specific areas of focus include treating and handling pigs and maintaining the health and safety of you and your pigs.
- ▶ You should have a clean medical kit on hand, stored somewhere safe, that includes:
 - Thermometer
 - Medical gloves (e.g. latex or nitrile)
 - Needles and syringes of varying sizes (length and gauge) to match the weight of your pigs
- ▶ In addition, you should have the following supplies on hand:
 - Hog snare
 - Pig (sorting) board
 - Euthanasia tool (e.g. captive bolt gun or firearm)
 - Ear plugs
 - Some kind of soap
 - Some kind of disinfectant (e.g. alcohol, peroxide, iodine)
 - Injectable iron (necessary for piglets)
 - Injectable antibiotics (e.g. penicillin)
 - Injectable anti-inflammatory (e.g. meloxicam)
 - Electrolyte powder
 - Kaolin pectin, activated charcoal, and/or starch product
 - Scalpels (#10 or #15 blades)
 - Needle extension tube (e.g. Slap-Shot®)
 - Identification supplies for shipping pigs to market (e.g. ear tags and tagger, tattoo ink and slap hammer, or stencil and food-safe paint)

1.7 EMERGENCY MANAGEMENT

- ▶ Make an emergency plan to protect your property, your facilities, and your animals in the event of poor weather, disease outbreak, pigs escaping, equipment failure, or a feed or water supply issue.
- ▶ Create a contact list of emergency telephone numbers, including your neighbours, feed and water suppliers, veterinarian, exterminator, poison control, local animal shelter, animal care and control, transportation resources, local volunteer organizations, and your employees (if applicable). Include an out-of-town contact person who is unlikely to be affected by the same emergency.
- ▶ Make sure all this information is written down and that everyone on your farm and your contact person has a copy. Review, test, and update your emergency plan, supplies, and information regularly.

02

Legal Requirements

KEY POINTS

- ▶ A provincial Premises Identification Number (PID) is required if you own a pig, regardless of numbers.
- ▶ If you possess a pig, you **MUST** register your site with PigTRACE.
- ▶ All pork producers must follow requirements set out in the Code of Practice for the Care and Handling of Pigs, as well as provincial animal care laws.
- ▶ Know what is required prior to shipping. Requirements are different when shipping to provincially or federally inspected slaughter plants.
- ▶ Environmental regulations cover water, manure and deadstock management, and vary by province

2.1 PREMISES REGISTRATION

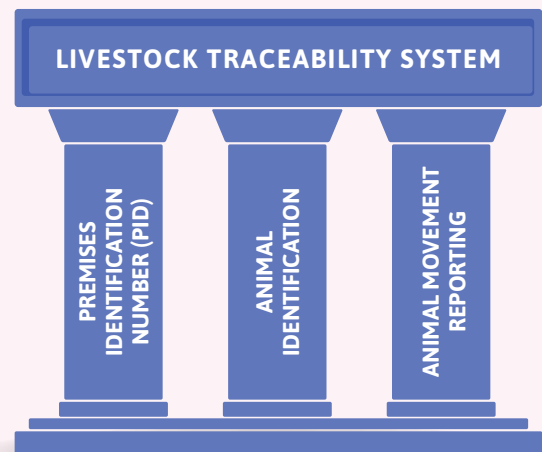
The Premises Identification (PID) system is an integral part of Canada's traceability system, linking livestock and poultry to geographic locations. It is critical in PREPARATION for, RESPONSE to, and RECOVERY from animal health issues and emergencies. A premises identification number is required if you possess any number of pigs.

Registering your premises enables the provincial government to contact you in the event of an animal disease crisis or a natural disaster that might impact your farm.

Need help?

Contact your provincial pork organization or provincial ministry of agriculture (contact info on [Page 5](#)) to obtain a PID registration form.

THREE PILLARS OF A LIVESTOCK TRACEABILITY SYSTEM



2.2 ANIMAL IDENTIFICATION AND MOVEMENT REPORTING

PigTRACE CHECKLIST: WHAT YOU NEED TO KNOW

Different types of movements or animals require different identification.

Movement of pigs to slaughter requires a herdmark number applied to the pig with either:

- (1) a shoulder slap tattoo;
- (2) a food-safe animal paint (stencil method); or
- (3) a PigTRACE ear tag with either the herdmark or individual ID number.

Contact the slaughter plant to verify what is acceptable.

Farm to farm movements do not require this identification, with the exception of pigs that have already been used for breeding. Pigs that have been used in breeding must be identified with a 15-digit, individual ID ear tag before moving to another farm.


All incoming and outgoing pig movements must be reported to PigTRACE within seven (7) days after the movement.

PigTRACE is mandated by federal law. The program is enforced by the Canadian Food Inspection Agency (CFIA). Non-compliance is subject to monetary penalties.

Tags can be ordered online at www.cpc-ccp.com/purchasing-tags or through your provincial pork organization (contact info on [Page 5](#)).

Prior to Shipping

Order tags in advance — provincial abattoirs will not slaughter pigs that do not have the proper identification.



PigTRACE for Small-Scale Pig Producers

This information sheet is intended to provide a quick summary of the main program elements of PigTRACE, an industry led, pig traceability initiative designed to ensure protection, prosperity and peace of mind in responding to animal health and food safety emergencies. The program is mandated by federal law, which came into effect on July 1, 2014 by amendment to the federal *Health of Animals Regulations*.

Requirements (*all pig owners must register an account with PigTRACE, see page 2)

(1) Report all incoming and outgoing pig movements to PigTRACE within 7 days (after movement).

Internet: login to www.pigtrace.ca (computer or mobile browser)
Fax: 1-877-301-6710 (manifest sheets are available, but any format may be used)
Phone: 1-866-300-1825

- o Information to report:
 - origin and destination locations
 - date & time of departure or reception
 - license plate of vehicle or trailer (if tandem unit)
 - number of pigs
 - animal identification (*where applicable, see below)



(2) Animal identification required for certain types of movements:

The program provides two options for pig identification:

- o The **herd mark** is a 5-digit number assigned to a farm. It can only be used for movements to **slaughter or export**, as it must identify the last farm of residence before slaughter or export.
- o The **individual ID** is a unique 15-digit number that is specific to every pig. This can be used to identify pigs going anywhere.



Approved animal identifiers
INDIVIDUAL ID

Some farms moving to a farm premises
Large pigs going to farm
Pigs going to slaughter
Exported breeding pigs
Imported pigs


Approved animal identifiers
HERD MARK

Pig going to slaughter
Pig going to slaughter
Shoulder slap tattoo
Small ear tag for ear tattoo
Exported piglets and border pigs

PigTRACE Canada is an initiative of the Canadian Pork Council

pigtrace.ca | porctrace.ca



PigTRACE Herdmark Identification of Pigs Going to Slaughter with Livestock Spray Paint and a Stencil

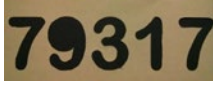
Pigs going direct to slaughter from a farm require EITHER a PigTRACE ear tag or herdmark tattoo (a 5-digit number we assign to each farm with your registration).

Effective May 1, 2019 herdmark identification using **non-toxic, livestock spray paint and a stencil** is approved for use on pigs going direct to slaughter from a farm.



- This method is **not valid for shipment through assembly yard or auction**. Direct from farm to slaughter only.
- Producers should confirm the preferred method of identification with their abattoir. Slap tattooing or ear tags may be preferred to the spray paint method.
- Must use the herdmark registered to the farm premises through PigTRACE. Do not use a herdmark registered to a different property or one that is counterfeit (i.e., not assigned from PigTRACE).
- Livestock spray paint is widely available from local agricultural supply stores or directly from various manufacturers (online or phone). **Note:** food safety standards stipulate that paints used on food animals **must not contain** any of the following substances:
 - o Crystal violet
 - o Leucomalachite green
 - o Leucocrystal violet
 - o Malachite green
 - o Brilliant green

Make stencil with heavy cardboard or other strong material.

Minimum size of numbers: 2 inches high, ½ inch thick
(Larger number size can be used if preferred)



1. Mark pigs **no sooner than 2 hours before loading** them for transport to the abattoir by holding stencil within 1 inch of the surface of the pig at its mid-section near or along the backbone.
2. Work in teams of two if possible – one to distract and hold the pig while the other applies the identifier. Deploy spray paint following the manufacturer's instructions. Spray sound may startle the pig.
3. Ensure number is legible. If it isn't legible, repeat the process in a different location on the pig's back or mid-section.

pigtrace.ca | porctrace.ca

Source: www.cpc-ccp.com/pigtrace-for-small-scale-pig-producers

2.3 CODE OF PRACTICE FOR THE CARE AND HANDLING OF PIGS

- ▶ The Code of Practice for the Care and Handling of Pigs contains requirements for housing, care, transportation, and other animal husbandry practices.
- ▶ Individual provinces may have animal care or protection laws that will use the Code of Practice as a guideline and minimum standard. Caring for your pigs according to the Code of Practice can protect you from animal abuse or neglect allegations.

You can find more information on the Codes of Practice for the Care and Handling of Farm Animals related to pigs at www.nfacc.ca/codes-of-practice/pigs.

2.4 CANADIAN PORK EXCELLENCE (CPE)

CPE is a national program that covers three on-farm components: Traceability (PigTRACE), Food Safety (PigSAFE or CQA), and Animal Care (PigCARE or ACA). These programs are mandatory for all pork producers **shipping pigs to a federally inspected slaughter plant**.

Outdoor producers have successfully registered in the CPE program. Pay special attention to the Outdoor Access and Multiple Species Certifications in Module 10 of the [PigSAFE|PigCARE Producer Manual](#).

However, most provincially inspected abattoirs do not require CQA-ACA or PigSAFE|PigCARE.

For more information, please visit the Canadian Pork Council website at www.cpc-ccp.com/canadian-pork-excellence

2.5 ENVIRONMENTAL MANAGEMENT

It is important that your operation has reviewed and complies with provincial rules and regulations related to environmental and water management for livestock production. Provincial rules and regulations vary by province. Check with your provincial ministry of agriculture or environment for more information.

Animal Care Laws

Ensure you are aware of your own provincial laws related to animal care.

03

Housing and Management

KEY POINTS

- ▶ Pigs require adequate shelter that protects them from weather (sunburn, cold) and predators.
 - ▶ Proper construction and maintenance of fencing is essential.
 - ▶ Plan and accommodate for sick or injured pigs that require treatment and care.
-

3.1 SHELTERS

- ▶ A well-constructed barn, shed, or hoop structure will work to house and care for pigs. Examples of different types of shelters that can be used are seen on the following page. Most will be suitable for a farrowing sow.
- ▶ Large bales can be arranged in the form of a shelter.
 - Bales will provide insulation from cold and dampness.
- ▶ Pigs can be destructive. Shelters need to be robust in nature to avoid damage to the shelter and injury to the pigs. It is recommended to use lag bolts (not screws), 2" x 6" lumber (not 2" x 4") and ensure corners are reinforced.
- ▶ Avoid using treated wood, as it contains chemicals that, if ingested by the pigs, can contaminate their meat.
- ▶ Ensure shelters are constructed prior to pigs arriving at your farm.

3.2 SHELTER REQUIREMENTS

- ▶ Minimize the impact of adverse weather by providing a dry nesting area and shade. Shelters need to be weatherproof and provide adequate bedding (straw/shavings) when required.
- ▶ Accommodate all pigs enabling them to lie down comfortably. If all pigs within the area (pen, pasture) cannot fit in the shelter at the same time, there is not sufficient protection.
- ▶ Construct separate areas or buildings for sick and quarantined animals that prevent nose-to-nose contact with the rest of your pigs. [See Section 3.8.](#)
- ▶ Emergency plans need to be developed for poor weather, disease outbreak, pigs escaping, equipment failure, or a feed or water supply issue.
 - For pigs kept in enclosed buildings, the plan also needs to consider temperature and ventilation regulation in the event of a power failure or mechanical breakdown.



3.3 OUTDOOR MANAGEMENT

- ▶ Typical set-up consists of paddocks containing penned groups of pigs, with shelter provided in each pen. Alternatively, an indoor building with access to an outdoor run is also an option.
- ▶ Ensure land has good drainage.
 - Avoid locations prone to flooding, stony, or heavy soils.
- ▶ Adequate shelter is required for each pen or paddock.

3.4 FENCING

Fencing is a critical factor in raising pigs. Fencing provides a barrier to keep pigs within a specific area, in addition to keeping predators and unwanted visitors out. Pigs will root or dig under a fence that is not properly designed.

- ▶ Give strong consideration to your fencing options prior to bringing pigs home, as pigs can be escape artists. Escaped pigs can form wild populations that heighten other pig farms' disease risk.
- ▶ Avoid using treated wood as it contains chemicals that, if ingested by the pigs, can contaminate their meat.
- ▶ Ensure perimeter fencing is properly designed, constructed, and maintained. Doing this will make your experience in raising pigs more enjoyable.
- ▶ Monitor and maintain fences, specifically looking for weak spots when using page wire, wood, or mesh fences.
- ▶ Ensure proper grounding of electric fences to avoid electrical shorts.
- ▶ If using an electric fence for your pens, it is recommended to also have an outer perimeter fence to protect your pigs from predators and other wildlife.
- ▶ Double-layered fencing, such as electric fenced pens within a larger perimeter fence, can also help prevent nose-to-nose contact with wildlife that can put your pigs at risk of contracting a disease.





Perimeter Fencing

- ▶ Fencing material includes wire mesh (page wire), high tensile (13.5 gauge) wire, panels, and wood.
- ▶ Fences should be at least 4 feet in height above ground and buried at least 1 foot below ground.
- ▶ Posts should be 3" to 5" in diameter and at least 5 feet in length. Space posts at most 15 to 18 feet apart.
- ▶ Ensure paddocks have good gate access — this facilitates handling and moving pigs.
- ▶ Consider double fencing. Fences should be placed at least 2 to 3 feet apart. This reduces predation and limits nose-to-nose contact with wildlife.



Electric Fencing

- ▶ Not recommended as the only type of perimeter fencing.
- ▶ Use inside existing perimeter fencing.
 - Use one or two strands of electric wire, 6" and 12" off the ground.
 - This prevents pigs from rooting under the fence.
- ▶ Can be used for temporary fencing within a paddock.
- ▶ Training is required.
 - To train pigs, place the electric fence in front of solid fencing. When pigs encounter it and get shocked, the solid fence will prevent them from bolting forward out of the pen.

3.5 SPACE ALLOWANCE

- ▶ For outdoor-raised pigs, typically more space is given per pig. This helps with the management of the land and provides extra space to accommodate grazing opportunities and maintenance of vegetation. (The Code of Practice does not provide guidelines on the space allowance per pig for outdoor production.)
- ▶ A typical rule of thumb for raising pigs outdoors is 6 – 10 pigs per acre, but this is wholly dependent on your pasture. Refer to [Section 4](#) for more guidance on pasture management.

3.6 SUNBURN PROTECTION (Shade and Wallows)

- ▶ Sunburn is common in outdoor-raised pigs, especially in early summer (May and June).
- ▶ Severe sunburn, when the skin blisters, can cause pregnancy failure, pain, discomfort, poor growth, and increased stress levels.
- ▶ Shade and wallows are essential in managing sunburn.



Shade

- ▶ Shade is essential – sunburn will result when shade is not provided.
- ▶ Natural or man-made shelters/shade can provide pigs relief from the sun.
- ▶ Provide a dry, clean bed of straw in a shaded area. This encourages pigs to lie in these areas.



Wallows

- ▶ Wallows are used for cooling and sun protection.
- ▶ Provide enough space for twice the number of pigs it is intended for — this enables more submissive pigs access to the wallow.
- ▶ Wallows should be more liquid than mud.
 - Prevent wallows from drying out — add water if necessary.
 - Sprinklers can be used in a concentrated area (of the pasture) to create a wallow.
- ▶ Provide a supply of clean water for drinking, separate from the wallow.
- ▶ Do not allow wallows to become stagnant — this can lead to infections.
 - Cleanliness is important. To help manage parasite and pathogen load, move to a different location when manure starts to build up.



◆ A portable handling chute can be an effective way to handle and restrain pigs in outdoor systems

Handling chutes placed in a common area connected to paddocks through a central alleyway is a simple and safe way to handle your pigs when required.



3.7 HANDLING AND RESTRAINT AREAS

- ▶ Use when multiple pigs require examination, treatments, or vaccinations.
- ▶ This area should have easy access to the main pens or paddocks.
- ▶ Include a chute that can restrict movement.
- ▶ Complete a 'walk-through' in order to familiarize pigs with the area. This will make future handling easier.

3.8 HOSPITAL PENS

- ▶ Separated hospital pens should be used when a sick or injured pig requires treatment.
- ▶ Pigs in a hospital pen should not be able to contact the main herd — this will restrict the spread of disease.
- ▶ Should include:
 - Additional comfort and bedding
 - No competition from other pigs
 - Access to feed and water
 - Shelter that is very close to the feed and water



◆ It is essential that hospital pens provide additional comfort in a location away from your main herd. Providing easy access to the hospital pen/area will aid in pig movement. This example is in a converted horse stall, but a hospital pen could also be outside, as long as adequate shelter and bedding are provided.

3.9 CLEANING AND DISINFECTION

Cleaning and disinfecting throughout the year are important steps in keeping your pigs healthy. Different strategies are required based on the type of housing and management systems you implement on your farm.

Pasture/Outdoor Facilities

- ▶ Rotate pastures, ensuring pigs always have access to a clean area. This keeps the parasite load lower.
- ▶ If possible, scrape out, wash, and disinfect shelters (and let them dry) on an annual basis.
 - If washing is not possible, scrape out the shelter and let it dry. Speak with your veterinarian regarding the use of crushed limestone or other drying agents or disinfectant powders. Be careful with other forms of lime (e.g. slaked or hydrated), as they are corrosive.

Indoor Facilities

- ▶ Scrape, wash, disinfect, and dry pens and shelters in between batches of pigs. This reduces pathogen levels.
 - If washing is not possible (as mentioned above), scrape the pen and let it dry.
- ▶ Most disinfectants will not work if the surface (pen) is not clean before applying the disinfectant.
- ▶ Follow the manufacturer's directions for mixing and dilution of these disinfectants.
- ▶ Work with your veterinarian to determine the most effective disinfectant for your operation.



Cleaning Between Batches

It is recommended to scrape, wash, disinfect, and dry areas between batches of pigs. This may not always be possible with all systems. The goal is to provide the cleanest possible area/pen/room in between batches of pigs to reduce possible disease transmission.

04

Pasture Management

KEY POINTS

- ▶ Pasture alone is not sufficient to meet pigs' nutritional needs year-round. Supplemental feed is required.
- ▶ Rotational grazing improves pasture and pig performance.
- ▶ Pigs raised outdoors are more susceptible to parasite infection. Parasites present a human health and food safety risk. Managing parasite and pathogen load is essential.

4.1 NUTRITION ON PASTURE

- ▶ Pigs cannot survive year-round on pasture alone.
- ▶ Ensure access to a balanced diet (pasture, complete feed) that ensures nutritional requirements are met ([see Section 5](#)).
- ▶ Inspect your pasture for the presence of poisonous weeds ([see Section 5.4](#)).



▶ Pigs on well-maintained pasture.

4.2 PASTURE MANAGEMENT

- ▶ Select forage varieties specific for pigs.
- ▶ Rooting destroys pasture.
 - Pasture rotation is key to reduce pasture damage, erosion, and parasite risk. The longer pigs stay in one area, the greater the risk. (See [Section 9.7](#) on parasite management.)
 - Rotation allows for adequate vegetation regrowth and avoids excessive damage to the forage stand.

Common Parasites

Pigs on pasture have an increased parasite risk. Parasites present a human health and food safety risk. Disease and parasite management is essential. Four most common parasites are pork tapeworms (*Tenia solium*), large roundworms (*Ascaris suum*), Trichinella, and Toxoplasma. Work with your herd veterinarian to develop a parasite management plan. (See [Section 9.7](#) and [Section 12.4](#) for more guidance.)

4.3 ROTATIONAL GRAZING

- ▶ Rotational grazing is the practice of selectively moving animals (pigs) in a planned manner designed to improve soil, plant, and animal health.
 - Pasture movements need to be planned ahead of time, based on forage availability and environmental factors.
- ▶ Divide pastures into smaller paddocks, allowing a small area to be intensively grazed while the rest of the pasture is rested. This allows grazed plants to fully recover prior to being grazed again.
- ▶ Electric fencing can be used to create smaller paddocks within the pasture (see [Section 3.4](#)). However, a pig-proof perimeter fence should be used around the whole pasture.
- ▶ It is essential to have a source of shade and water in every paddock.
- ▶ The length of time a paddock is grazed will depend on the size of the herd and the size of the paddock, in addition to local environmental factors (e.g. topography, rainfall).
 - It is better to keep pigs in a smaller area and rotate them more often (even daily), than keeping them in a larger area for a longer time.
- ▶ You can use forage height (within a paddock) as an indicator for rotation or assess the amount of time spent rooting versus grazing or other activities. An increase in rooting signals that rotation is required. Rooting destroys pasture.
- ▶ Maintaining a higher vegetation height can minimize soil damage, erosion potential, and encourage faster plant regrowth. Pigs should be moved when vegetative cover (forage availability) drops below 50 to 75% (i.e. more than 25% of the ground is visible).
- ▶ Pigs should be moved to a new pasture based on the assessment of plant availability and forage regrowth potential. Years that experience low rainfall and slow pasture growth will result in pasture capacity (number of pigs and/or time on it) being reduced. It is important to allow for adequate regrowth to ensure the longevity of your pasture and performance of your pigs.

How often do I move my pigs?

Subdividing a 20-acre pasture into 1-acre paddocks will provide you 57 days of rest for each paddock when a single paddock is grazed for 3 days (19 resting paddocks x 3 days = 57 days of rest). The amount of rest required for adequate plant recovery will vary from year to year. Recovery is dependent on grazing intensity and weather-related growing conditions throughout the year.

Impacts of Poor Grazing

Improper grazing management reduces plant tolerance to stress, cold, drought, and disease. Excessive grazing results in desirable forage plants being replaced by less desirable species and reduction of surface litter (soil protection), resulting in larger areas of bare ground and increased risk of soil erosion. Water and mineral cycles could cease to function efficiently, and overall range and pasture productivity would decline.

05

Feed and Water

KEY POINTS

- ▶ Pigs are omnivores (eat food from plant and animal origin) and require energy (fats, carbohydrates), protein (amino acids), vitamins and minerals, and clean water.
- ▶ Pigs cannot be raised year-round on pasture alone. They need supplemental feed.
- ▶ Feed represents 60-75% of the cost of raising a pig to market weight. Choosing the appropriate feed for the stage of growth has a direct effect on how long it takes to get a pig to market/slaughter weight, how much it costs, and the effect on meat quality.
- ▶ Feeding meat or meat products to pigs - purposely or accidentally - can infect them with disease and is illegal. This includes all pet foods or food waste that (may) contain meat or meat by-products.
 - Do not feed kitchen waste or food scraps to pigs due to the risk of them being contaminated or containing small amounts of meat products.

Whether it be “organic”, “only produce”, or “still good”, **food waste can still be contaminated with diseases** that could make your pigs sick, sometimes fatally. If it is contaminated with a reportable disease, it might also result in all of your pigs and your neighbours’ pigs needing to be killed for disease control purposes.

Help us keep pigs safe by never giving food waste to your pigs. It’s just not worth the risk!



5.1 FEEDING YOUR PIG

Pigs can be raised on a variety of feeds, as long as the nutritional requirements for various stages of production are met. Pigs need to be fed everyday, with the amount of feed they require being dependent on their breed, age, sex, stage of growth, condition, and type of ingredients used. Typically, sows and boars are fed once or twice a day, while growing pigs would ideally have access to feed 24 hours a day.

It is important to note that pigs cannot be raised year-round on pasture alone and will require additional feed for proper growth and development. There are several options to consider when feeding your pigs:

- ▶ **Complete Feeds.** Typically purchased from a feed mill and designed to meet all the nutritional requirements of your pigs. Different feeds will be required for different stages of growth, and your feed company can assist with this. This might seem like the most expensive approach upfront, but it is also the simplest, and your pigs will have the best growth.
- ▶ **Grain-Based Homemade Feeds.** Some individuals will prefer to make (grind) their own feed to save on cost. These diets can consist of a single grain (e.g. wheat or barley) or multiple grains (e.g. wheat/barley/peas/lentils) with or without by-products (distillers, screenings). These diets will require an additional vitamin/mineral supplement to ensure nutritional requirements are met. Diets tend to be cheaper than complete feeds; however, pigs will also tend to grow more slowly.
- ▶ **Produce-Based Homemade Feeds.** In some cases, produce (fruits and vegetables) may provide a low-cost opportunity in feeding your pigs. These diets will require an additional specific vitamin/mineral supplement to ensure nutritional needs of the pig are met. While it is acceptable to use produce in a feeding program, you must ensure it has never entered a kitchen or has been in contact with meat or products of animal origin. Typically, supermarket or market garden leftovers would provide a viable option for sourcing these types of products. **DO NOT feed food/table scraps as they can be contaminated with meat products.**

5.2 PIG NUTRITION

Pigs can be raised on a variety of feeds, as long as you meet the nutritional requirements for various stages of production. Poorly balanced diets result in pigs that get sick more easily, grow slowly, convert feed inefficiently, and produce a poorer quality carcass (e.g. too fat, low muscle mass). If you plan on making your own feed, take the following into consideration:

Energy

- ▶ Pigs require energy for maintenance, growth, and reproduction. Fats and carbohydrates make up the bulk of the pig's energy requirements.
- ▶ Common energy sources include wheat, barley, and corn.

Protein

- ▶ Pigs of all ages and stages require protein.
- ▶ Common protein sources include soybean meal, peas, or lentils.
- ▶ Overfeeding protein should be avoided, as protein is normally the most expensive component in the diet.
- ▶ See [Table 5.1](#) for specific protein recommendations for various stages of growth.
- ▶ Consult with your feed company or nutritionist for recommendations on the correct protein level for your pigs.

HOT TIP

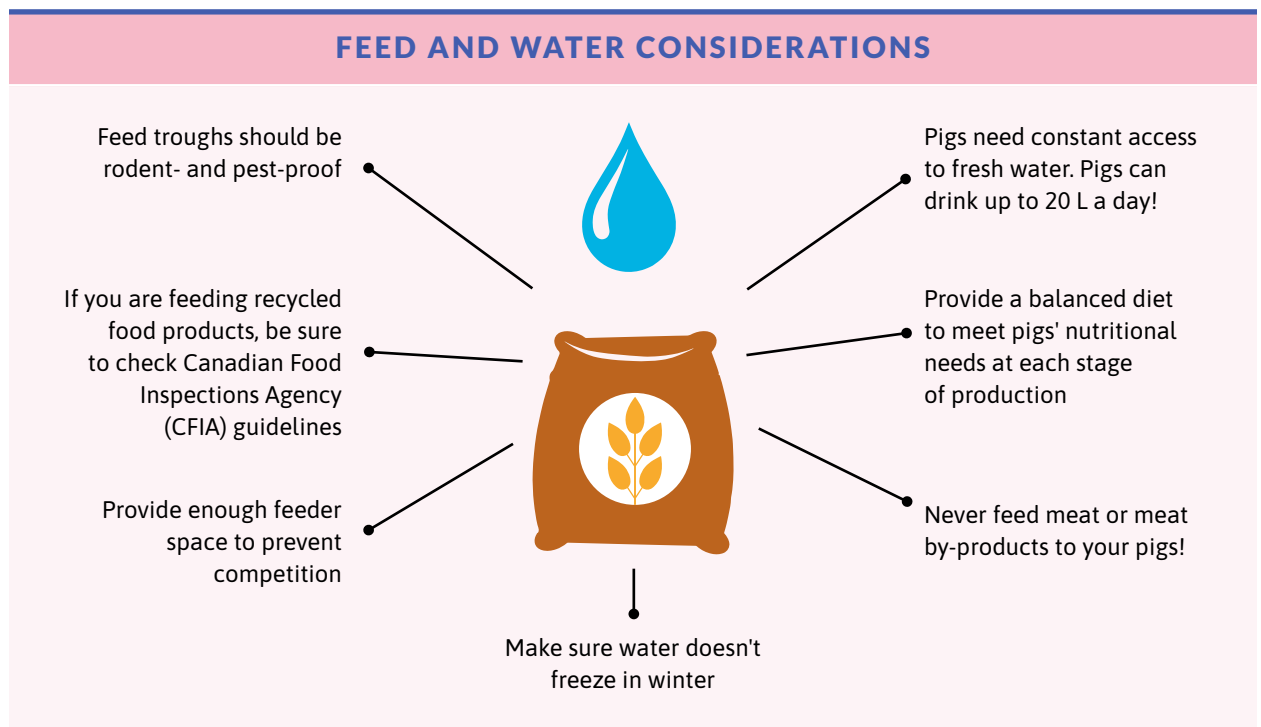
The simplest way to raise pigs to market weight and meet nutritional requirements is by purchasing complete feed.

Vitamins and Minerals

- ▶ Vitamins and minerals are essential for the proper functioning of all physiological processes. Deficiencies, excesses, and imbalances in vitamins and minerals can cause health and/or production issues.
- ▶ Check with your feed company regarding availability.
- ▶ Use a vitamin/mineral supplement for all pig rations if not using a complete feed.

Alternative Feed Ingredients

- ▶ Common recycled food products that are approved as livestock feed are dehydrated bakery waste, dried distillers grains, and breakfast cereal process residue. The full list of approved feed ingredients can be found on the Canadian Food Inspection Agency (CFIA) website, Schedules IV and V of the Feed Regulations.
- ▶ An available/inexpensive ingredient should not compromise the health, well-being, or productivity of the pig when added to the diet.
- ▶ Any alternative ingredient must not contain meat products or by-products. For this reason, do not feed your pigs kitchen scraps (or international waste products from planes or ships).



5.3 FEED QUANTITY

- ▶ How much a pig eats is dependent on their breed and sex, age, stage of growth, and ingredients used. Adjust the amount of feed provided to the age, size, and condition of the pigs.
- ▶ Feed intake may be higher than expected when feed is nutritionally inadequate (particularly in energy).
- ▶ Providing more feed than required increases cost, feed waste, and can result in obesity and lower reproductive performance in breeding animals.
- ▶ Pigs cannot be raised year-round on pasture alone.

Table 5.1 Daily feeding requirements of pigs corresponding to animal weight/age

PIG WEIGHT/AGE	FEED REQUIREMENT PER DAY/PER PIG	PROTEIN CONTENT OF FEED REQUIRED PER DAY/PER PIG
Gilts (6+ months of age)	Feed 2-3% body weight per day. <i>E.g. 170 kg gilt requires 4.25 kg (170 x 2.5%) per day</i>	15-16% protein feed
Gestating Sows	Feed 1.5% of body weight per day. <i>E.g. a 200 kg sow requires 3 kg of feed/day.</i>	13% protein feed
▶ DO NOT overfeed sows during gestation since it lowers feed intake during lactation.		
Lactating Sows	Feed 2.0% of body weight per day plus 0.5 kg for each piglet nursing. <i>E.g. a 200 kg sow with 5 nursing piglets requires 6.5 kg (4 + 2.5) of feed/day.</i>	15-16% protein feed
▶ Nutrient requirements of a lactating sow are three times higher than during gestation.		
▶ DO NOT compromise on water. Accessibility to water can limit lactation feed intake so ensure that water flow rates are at least 2 litres/minute.		
Boars	Feed 2.0 % of body weight per day. <i>E.g. a 300-kg boar requires 6 kg of feed/day.</i>	13% protein feed
18 kg (40 lbs) pig About 8 weeks of age	0.7 - 0.9 kg (1.5 - 2 lbs)	18% protein feed
35 kg (75 lbs) About 12 weeks of age	1.1 - 1.35 kg (2.5 - 3 lbs)	16% protein feed
55 - 60 kg (125 lbs) About 16 weeks of age	1.8 - 2.3 kg (4 - 5 lbs)	16% protein feed
80 kg (175 lbs)	1.8 - 2.3 kg (4 - 5 lbs)	15% protein feed
110 - 115 kg (250 lbs)	Gradually increase feed so pigs are getting 2.7- 3.2 kg (6 - 7 lbs) per day	14-15% protein feed
▶ Gradually increase the amount of feed pigs are getting on a weekly basis, matching their growth.		
▶ Avoid feed wastage.		

OUTDOOR PRODUCTION

Pigs raised outdoors require more feed to maintain their body temperature than pigs raised indoors, particularly in colder weather.

5.4 FEED SAFETY

- ▶ Avoid feeding mouldy grain and diets. Refer to Table 5.2 for some examples of harmful moulds, fungi, and weeds.
- ▶ Clean up feed spills. Spills will attract pests and wild animals.
- ▶ Do not feed meat scraps and avoid purchasing feed from unknown sources.
- ▶ Store feed in a dry, secure area.
- ▶ Do not feed hay or straw to pigs that contain visible contaminants, such as dead rodents, bird nests, or animal feces. Also, avoid getting hay or straw from other farms that use pig manure to fertilize their soil.

Table 5.2 Examples of harmful moulds, fungi, and weeds.

TYPE	CONDITION		PROBLEMS/OBSERVATIONS
Mycotoxins	Produced by some moulds and fungi.	 <p>Source: Saskatchewan Agriculture</p>	<p>Potential growth problems, vomiting, diarrhea and, in extreme cases, death.</p> <p>Mycotoxins can cause significant reproductive issues when fed to sows.</p> <p>Can be present in feed that does not appear 'mouldy.'</p>
Ergot	Fungal disease in grains such as wheat, rye, and barley.	 <p>Source: Saskatchewan Agriculture</p>	<p>Feed refusal in market pigs.</p> <p>Decreased milk production and abortions in lactating sows.</p>
Red Root Pigweed		 <p>Source: Manitoba Agriculture</p>	<p>Can lead to weakness, trembling, lack of coordination, dragging rear legs, and death.</p> <p>Exposure occurs throughout summer and early fall.</p>
Cocklebur		 <p>Source: Manitoba Agriculture</p>	<p>Can lead to depression, nausea, weakness, vomiting, or death.</p> <p>Two-leaf seedling stage and ground seeds are most hazardous.</p>
Black Nightshade		 <p>Source: OMAFRA</p>	<p>Can lead to anorexia, depression, or death.</p> <p>Unpalatable – generally consumed in over-grazing situations.</p> <p>Leaves and green berries are most hazardous.</p>

5.5 FEEDERS

- ▶ Ensure feeders are easily accessible to all pigs.
 - One feeder space can usually accommodate 13-18 pigs.
- ▶ Preferably choose feeders that are weather- and pest-resistant.
 - Adding hinged covers to feed bunks that your pigs can open with their snouts help protect the feed from pests and other animals (see photos below).
- ▶ Avoid contamination by feces and urine. Clean feeders as required.
- ▶ Locate feeders near the pen walls/fences to allow you to feed by hand (when feeding few pigs).
- ▶ Incorporate hoppers to your feeders when feeding a larger number of pigs. This ensures feed availability.



▲▲▲ Pigs fed from small buckets.



▲▲ Water trough.



▲▲▲ Water bucket.



▲▲▲ Pest-resistant feed bunk equipped with a hinged cover that pigs can lift with their snouts to feed.



Feeder Space Requirements

For more information, refer to Appendix F of the Code of Practice for the Care and Handling of Pigs.

◀ Pigs fed on a feed mat.

5.6 WATER

- ▶ Pigs require more water as they grow. Pigs consume approximately 10% of their body weight per day in water (2 to 3 times higher than feed intake). [Table 5.3](#) provides information related to a pig's water consumption at various stages of growth.
- ▶ Pigs require continuous access to water (24/7) to grow to their best potential.
- ▶ Ensure clean water is available and easily accessible.
- ▶ Heating elements will be required in winter to ensure water sources do not freeze.
- ▶ Water can be delivered through multiple options — nipple drinkers, tubs, or troughs.
 - Keep in mind the goal is to provide fresh, clean water continuously at all times. Therefore, the system you choose will depend on water source, number of pigs, pasture/penning layout, and season.
 - However, surface water should not be used as a water source for your pigs, as it can attract rodents and birds and can become contaminated.
 - Refer to [Table 5.4](#) to evaluate your options.
- ▶ If using tubs, buckets, or troughs, ensure they are cleaned as required in order to avoid contamination.
- ▶ Also consider testing your water (from the drinking source) annually, in addition to regular chlorination, to avoid risks associated with fecal coliforms.

Did you know?

Water can be one of the easiest things to overlook when raising pigs. However, it is one of the most important components of a feeding program for swine. Vital to all body functions, water accounts for as much as 80% of body weight in pigs at birth, declining to about 50% at market weight.

Table 5.3 Daily water requirements for pigs of different ages

PIG WEIGHT (KGS)	DAILY WATER CONSUMPTION (LITRES)
Lactating Sows	10.0 – 20.0
Gestating Sows	5.0 – 10.0
Weanling (5 – 15 kg)	1.0 – 3.5
Grower (15 – 50 kg)	3.5 – 7.0
Finisher	7.0 – 10.0

Table 5.4 Water delivery and management

MANUAL	AUTOMATIC
Trough, bucket, or tub	Nipple drinkers or water bowls
Clean and add fresh water daily	Provides continuous supply of fresh water
Need to be durable and mounted in a manner that avoids tipping	Typically mounted to the side of penning
Locate where water can be easily added	Adjust height to the size of pigs*
Need to be cleaned on a regular basis	Check flow rates and availability

* Refer to Appendix G of the [Code of Practice for the Care and Handling of Pigs](#) for more information on how to adequately provide water to your pigs.

06

Handling

KEY POINTS

- ▶ Use pigs' herd behaviour. The instinct of pigs is to stay together, follow one another, and move as a group.
- ▶ Use appropriate handling equipment for the size of the pig when required.
- ▶ Move pigs calmly without loud noises or yelling.
- ▶ Identify when pigs are becoming stressed during handling and take action to reduce it.
- ▶ Breeding stock (e.g. boars, sows with their litters) require caution at all times. Always bring a sort board with you when handling them.
- ▶ Avoid the use of dogs or electric prods to move pigs.

6.1 PIG HANDLING CONCEPTS

- ▶ Changes in ground or floor surface, temperature, and airflow may slow or stop pig flow/movement.
- ▶ Visual distractions — people, moving objects, shadows, or beams of light — may distract their attention enough to interrupt flow.
- ▶ Pigs prefer lit areas. They move more easily from dark to light areas than the reverse.
- ▶ Daily contact with the pigs reduces their stress during handling and makes handling easier for you.
- ▶ Pigs are social animals and move better as a group rather than a single animal.
- ▶ Food can sometimes be used as motivation when moving pigs.

MOVING BOARS

Pay special attention to boars as they can be extremely dangerous.

Helpful Hint

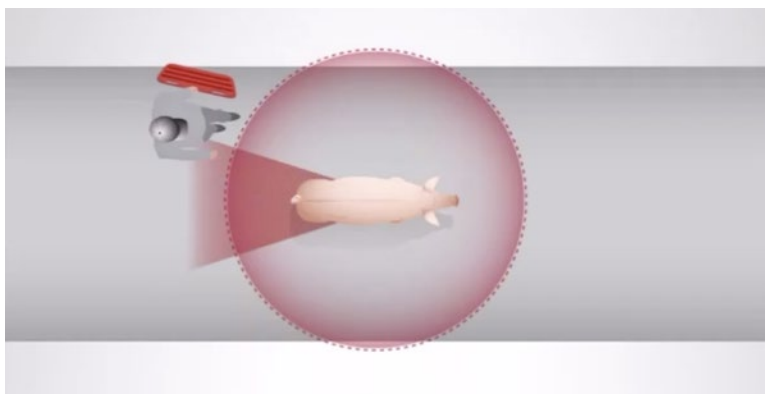
Moving pigs may be easiest at feeding time, allowing you to lead them to a specific area, resulting in less stress for you and the pigs.



▲ The use of handling corridors can be useful when moving pigs in between pastures.

6.2 FLIGHT ZONE

- ▶ Pigs have wide-angle vision (310°), with a small blind spot directly behind them (55°). Avoid being in a pig's blind spot while moving them as this encourages them to stop moving and turn around.
- ▶ Pigs generally move in a direction opposite that of the handler's movement into their flight zone.
 - Approaching from behind tends to encourage the animal to move forward.
 - Approaching from in front of a pig's shoulder tends to encourage the pig to move the other way (e.g. backwards).
- ▶ However, over-pressuring the pig will encourage it to try to flee past you to get release from your pressure.
 - Apply light pressure to get the pig moving, then reward the pig by "releasing" pressure.



◀ A pig's flight zone and blind spot.

Pigs' "flight zones" (red; left and centre) will collectively form a "bubble" (blue; right) around the handler. A handler can use this bubble to move groups of pigs.

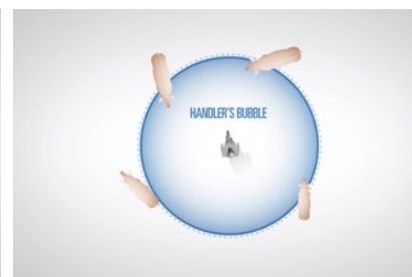
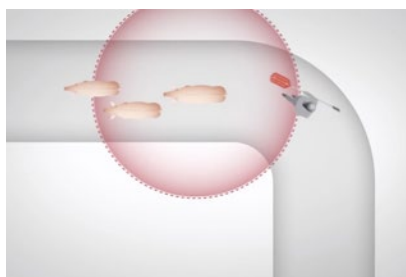
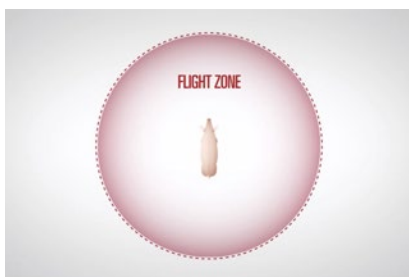


FIG 16 | HANDLING PRACTICES

WHY IS LOW-STRESS PIG HANDLING IMPORTANT?

Calm, low-stress handling = Less fearful pigs
Less fearful pigs are easier to handle and require less time to move safer for handlers more productive and healthier. This results in less stress for both pigs and handlers.

TECHNIQUES FOR LOW-STRESS PIG HANDLING

1. Use appropriate handling tools to complement your positioning and enhance pig movement. (Electric prods should be used only as a last resort and in accordance with the Code of Practice for the Care and Handling of Pigs.)
2. Use pigs' herd behaviour. The instinct of pigs is to stay together. Follow one another and move as a group.

SMART PIG HANDLING

A series of videos is available to producers which provide training on how to safely and effectively handle pigs while minimizing stress to handlers and their animals.

Basic Pig Behaviour

www.youtube.com/watch?v=QIMmxt-YbE8

Principles of Pig Handling

www.youtube.com/watch?v=aeCS71Zznys

Source: [PigSAFE|PigCARE Producer Manual](#)
– Canadian Pork Council – 2018

6.3 SIGNS OF STRESS

- ▶ Release your pressure on the pigs by standing still or stepping back and remaining quiet if you see the following signs of stress:
 - Raised ears
 - Rigid posture
 - Trying to escape the handler
 - Jumping on other pigs
 - Piling or crowding

6.4 INDICATORS OF DISTRESS DURING HANDLING

- ▶ Stop moving/handling a pig immediately and allow it to rest until it has recovered (15–30 minutes) if you see the following indicators of distress:
 - Open mouth breathing (panting)
 - Vocalization (squealing or barking)
 - Blotchy skin (reddish/purple color)
 - Stiffness
 - Muscle tremors (animal begin shaking)
 - Increased heart rate
 - Increased body temperature

6.5 PIG RESTRAINT

There are times when you will need to restrain a pig. These times include ear tagging, vaccinating, examining, treating a pig for injury or illness, or euthanasia.

UNDER 20 KG.	OVER 20 KG.
<ul style="list-style-type: none"> • Approach calmly, herding into a corner if possible. • Firmly grasp one or both hind legs of the piglet. • Lift from the pen floor by putting your other hand under the pig's belly or chest. • Rapidly transfer to holding the pig with both hands, supporting the pig's weight. <div data-bbox="284 1591 797 1827" data-label="Image"> </div>	<ul style="list-style-type: none"> • Too heavy to lift. • Restrain by holding them in a corner or alley using a pig board. • Pig snares can be used to restrain larger pigs for a very short time.

USING A SNARE PROPERLY

Ear plugs or other ear protection is highly recommended.





Ensure good footing is available, as a snared pig is more likely to panic if it is on slippery/wet ground.

- ▶ Approach the pig calmly and let the pig chew the snare's loop.
- ▶ Position the loop as far back in the mouth on the top jaw as possible, at least be behind the pig's canine teeth.
- ▶ Quickly pull the snare tight and hold on firmly with both hands, keeping the snare in a straight line with the pig's head, neck, and backbone.
- ▶ Perform procedures quickly so you can release the pig as soon as possible.



- ▶ A handling chute is an important piece of equipment in your operation when it comes to handling pigs that require treatment or vaccinations.

6.6 PIG HANDLING TOOLS

TOOLS	DESCRIPTION	USE	PIG TYPE	PHOTO
Pig (Sorting) Board	<p>Creates a physical and visual barrier.</p> <p>Sorting boards can be purchased, or constructed from a partial sheet of plywood, with holes for handles.</p>	<p>When using a sorting board, make sure to use the ground as an anchor.</p> <p>DO NOT hold back a pig with the board wedged only against your legs/knees.</p>	Can be used for all ages and sizes of pigs.	
Rattle (Shaker) Paddle	<p>Provides auditory and visual stimuli.</p> <p>Homemade devices such as shaker cans or bottles can also be effective in moving pigs.</p>	<p>Make noise for one or two seconds to start pigs moving.</p> <p>Gently tap pigs with the paddles to extend the handler's reach.</p> <p>Avoid making constant noise or contact when moving pigs - this causes them to focus too much on you and inhibits movement.</p>	Can be used for all ages and sizes of pigs.	
Nylon Flag	<p>Provides a visual stimulus.</p> <p>Can be constructed utilizing a square or rectangular piece of plastic or fabric on a rod or stick.</p>	Blocks a pig's visual path and is used as a tool to provide the illusion of a dead end.	Typically used for grower and finishing hogs.	
Pig Snare	A mechanical device made of a cable loop and sliding locks used to restrain larger pigs.	<p>The size of the snare loop should be relevant to the size of the pig being restrained.</p> <p>Use only when absolutely necessary. Ensure the person snaring is trained and competent at this activity.</p> <p>Use according to the manufacturer's guidelines.</p>	Used for larger pigs — grower, finishing, sows and boars — typically when treatment or euthanasia is required.	

Caution

Dogs and electric prods increase pigs' stress during handling. Dogs should not be used to handle pigs, and electric prods should be used only as a last resort and in accordance with the [Code of Practice for the Care and Handling of Pigs](#).

07

Reproduction Management

KEY POINTS

- ▶ House boars individually and use extreme caution when handling them, especially when sows/gilts are present.
- ▶ One boar is required for every 20 reproductive females.
- ▶ To avoid potentially bringing disease from another farm, it is better to have your own boar rather than borrowing a boar from another farm.
- ▶ Heat checking helps to ensure that your sows/gilts are pregnant, and, if they are not, they can be bred again.
- ▶ Appropriate feed quality and quantity are important to maintain a healthy pregnancy. Ensure a body condition score of 3.
- ▶ Farrowing is a critical time in the reproductive cycle and requires the right supplies, cleanliness, and warmth for the newborn piglets.

7.1 BOAR CARE

- ▶ Use extreme caution when handling boars. Boars can be very aggressive and unpredictable, especially when sows/gilts are in heat. Sorting boards are recommended at all times for handling boars.
- ▶ House boars in separate pens.
 - Place with sows/gilts only when breeding.
 - Boars can sometimes be housed together when sows/gilts are not present, depending on their temperament.
- ▶ Do not overfeed your boars. Feed to achieve a body condition of 3 (see [Figure 7.1](#) on page 38).
- ▶ Purchase a boar for your own herd. Sharing breeding stock can bring unwanted disease from another operation.

7.2 BREEDING

- ▶ One boar is required for 20 females.
- ▶ Place boar with females for at least 21 days to ensure breeding occurs.
 - Boars will express interest for females in heat (smelling, mounting). They will not show interest in pregnant females or those not in heat.



▲ Natural mating is the most common method of breeding for small-scale pig farms. Ensure great care is taken when handling boars as they can be very unpredictable.



▲ The back pressure test is one way of knowing when a sow or gilt is in heat. If she stands still when you apply pressure, she is likely in heat.

7.3 GESTATION

- ▶ Gestation length: 3 months, 3 weeks, and 3 days (116 days on average).
- ▶ Avoid mixing different groups of sows. This will minimize stress and aggression.
- ▶ Vaccinate sows/gilts on a timely basis. See [Section 9](#) for additional information.
- ▶ Feed to maintain an ideal body condition of 3 (see [Figure 7.1](#), next page).

MORE INFORMATION

Veterinarians are an important part of your herd health team. Contact your veterinarian when observing unusual symptoms or behaviour.

Confirming Pregnancy

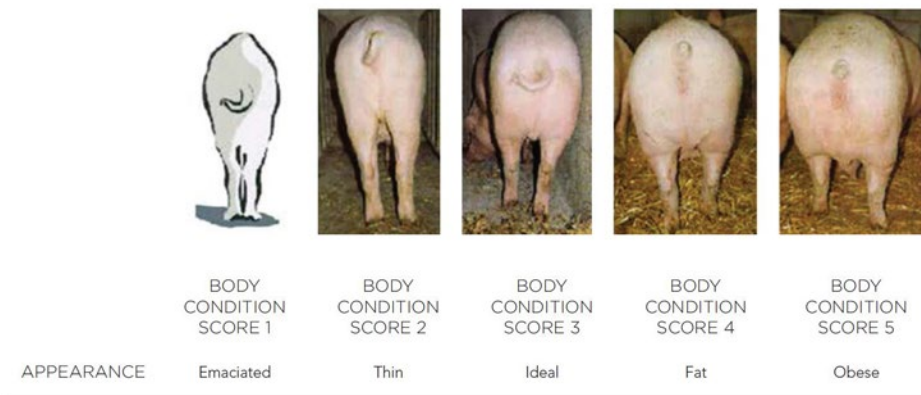
- ▶ Heat Checking
 - If possible, walk your boar past the desired (group of) sows.
 - When a sow shows significant interest in the boar and stands still when pressure is applied to her lower back, she is likely not pregnant.
 - If not possible to use a boar, watch for mounting behaviour (riding), a swollen/engorged vulva, and/or clear vaginal discharge.
 - Your veterinarian can perform an ultrasound as early as 25-28 days after breeding.

Gestation Complications

- ▶ Infections typically result in a thick, white vaginal discharge.
 - Treatment will be required. Contact your veterinarian.
 - Sow/gilt most likely not pregnant.
- ▶ Abortions are a loss of pregnancy after 55 days post-breeding.
 - Record when they occur.
 - Work with your veterinarian if you experience multiple abortions.

Figure 7.1 Body Condition Scoring (BCS) chart

BODY CONDITION SCORING SYSTEM



Source: [PigSAFE|PigCARE Producer Manual](#) – Canadian Pork Council – 2018

Body Condition Scoring

Body condition scoring (BCS) is a management tool used to assess body reserves (fat) of your pigs. It is a quick and accurate way of assessing if you are meeting the nutritional needs of your pigs. You should strive to achieve a BCS of 3 at farrowing.

7.4 FARROWING AND LACTATION PERIOD

Proper planning and preparation are key for a successful farrowing process.

Farrowing Preparation

1. Thoroughly wash, disinfect, and dry farrowing area (for indoor farrowing facilities).
2. Provide adequate bedding (straw) material.
3. Move sows into the farrowing area approximately one week prior to their estimated farrowing date. Sows need to acclimatize to their surroundings prior to farrowing.
4. Keep the farrowing area clean and remove manure daily.
5. Additional heat sources (heat lamps, heat pads) are required for piglets, most importantly during their first week. Monitor temperature — ensure piglets do not get too hot or cold. Newborn piglets prefer an ambient temperature of 35°C (although the sow prefers it around 18°C).





▲ Ensure the farrowing area is thoroughly cleaned and disinfected, and adequate bedding provided well in advance of the estimated farrowing date.



▲ Additional heat sources, such as heat lamps, are important for piglet survival, especially during the first week and during colder months.

Farrowing Supplies

In some cases, you will be required to assist in the farrowing process. To do so effectively without compromising the health of the sow and piglets, specific supplies will be required:

- ▶ Obstetric gloves (large animal)
- ▶ Lube
- ▶ Bucket and access to clean, warm water
- ▶ Soap
- ▶ Disinfectant (e.g. iodine)
- ▶ Clean towels
- ▶ Pharmaceuticals. Contact your veterinarian for prescriptions and protocols for use.

What to Expect

- ▶ Sows/gilts can lose their appetite close to farrowing.
- ▶ Farrowing takes approximately one to six hours. Gilts tend to take longer to farrow than sows.
- ▶ Piglets should be born approximately 15–20 minutes apart, head or feet first.
- ▶ Afterbirth typically appears after the last piglet.

PREPARATION

Ensure you are properly prepared for farrowing. It is important for the future health and production of your pigs.

Farrowing Checklist

Feed	<ul style="list-style-type: none"> • Provide fresh feed shortly after farrowing. • Remove spoiled or stale feed. • Sows/gilts should begin eating within one day of farrowing. • Feed intake is crucial during lactation for adequate milk production, while not losing body condition. • Sows that lose excessive body condition may have difficulty rebreeding in a timely manner and should have piglets weaned early to prevent further health issues.
Water	<ul style="list-style-type: none"> • Provide clean, fresh water at all times. If provided in a bowl or tub that the piglets access, make sure to manage the water depth.
Day One Piglet Care	<ul style="list-style-type: none"> • Check sows every 30 minutes once farrowing starts or, even better, monitor them throughout. • Dry off newborn piglets with a CLEAN towel. • Assist piglets by moving them to the udder, ensuring they receive colostrum and start suckling immediately. • Move shivering piglets under the heat lamp. • Sows with piglets can be aggressive and unpredictable. Ensure it is safe to handle the piglets. <p>COLOSTRUM</p> <ul style="list-style-type: none"> • Piglets MUST consume colostrum within six to 12 hours after birth. • Colostrum provides concentrated energy and antibodies that are essential for immune system development. • Colostrum from its mother is preferred; other sows may provide colostrum in cases of necessity.
Week One Piglet Care	<p>IRON</p> <ul style="list-style-type: none"> • Piglets are iron deficient at birth. They will become anemic without iron. • All piglets MUST have an iron injection (regardless of indoor or outdoor production) before four days of age. Research has also shown that repeating the injection 15 days later will improve growth. • Iron can be administered orally or via injection in the neck. <p>CASTRATION</p> <ul style="list-style-type: none"> • The earlier you can castrate piglets after the farrowing date, the better (e.g. 2 to 3 days of age). • Castration performed at any age requires analgesic (pain control) to help control post-procedure pain. • Castration after 10 days of age requires anesthetic (numbing or sensation removal) and analgesic (pain control). • Access to these products requires a veterinary prescription in some provinces. Contact a veterinarian before farrowing to prepare for this. • A scalpel (#10 or #15 blade) is the preferred instrument to perform castration.

Continued next page

Continued from previous page

Week One Piglet Care

TAIL DOCKING

- Tail docking is the surgical removal of the tail and is rarely performed in outdoor production.
- Reduces unwanted behaviours such as tail biting.
- Analgesics (pain control) are required at any age.
- If performed, it is better done early in life (e.g. 2 to 3 days of age) because there is less bleeding and the wound heals faster.

EAR TAGGING

- Ear tagging does not require analgesics.

PAIN CONTROL

- Analgesics and anesthetics are required for a number of steps in processing your piglets. Consult with your veterinarian regarding products, dosage, and protocols for each. Some provinces require prescriptions to access these products.
- Ensure you receive proper training prior to performing any of the aforementioned procedures.

FOSTERING

- Required in cases where a sow cannot nurse her own litter (e.g. injury, death, savage behaviour, too many piglets).
- Foster sows need to be in good condition and nursing well.
- When fostering piglets, ensure the original piglets and foster piglets are approximately the same age so they can all compete for milk fairly.

HAND FEEDING

- If a sow cannot nurse and fostering is not an option, hand feeding can be done.
- Pan or syringe feeding is recommended. Bottle feeding can lead to aspiration and/or aspiration pneumonia.
- A high-quality bovine colostrum (check the IgG level) can be used in the first days, and swine milk replacer used for continued feeding.
- The piglet(s) and colostrum or milk replacer must be kept warm for successful digestion.
- Piglets must be fed frequently for success (1- to 2-hour increments to start).

7.5 FARROWING COMPLICATIONS

Identification of complications at farrowing is essential in ensuring the health and well-being of your pigs. Consult your veterinarian in developing a plan when difficulties arise.

COMPLICATION	DESCRIPTION	OUTCOME
Labour Difficulty (DYSTOCIA)	<ul style="list-style-type: none"> When more than 30 to 45 minutes pass in between piglets, or the sow is in distress, intervention may be required. 	<ul style="list-style-type: none"> An internal exam is required to determine cause of difficulty. Assisted farrowing may be required.
Prolapses	<ul style="list-style-type: none"> Prolapses typically occur near farrowing due to pushing associated with the delivery of piglets. 	<ul style="list-style-type: none"> Sows that prolapse may not rebreed and are more likely to prolapse again. Consider removing them from your herd.
No Milk (MASTITIS or AGALACTIA)	<ul style="list-style-type: none"> Mastitis is an inflammation of the mammary gland caused by an infection. Agalactia is a failure to secrete milk. 	<ul style="list-style-type: none"> Sows usually require a combination of antibiotics and anti-inflammatories. Piglets require an alternative energy source, such as another sow or milk replacer, to prevent starvation.
Savaging	<ul style="list-style-type: none"> Sow aggression that involves biting, injuring, attacking, and even killing piglets. 	<ul style="list-style-type: none"> Immediately care for injured piglets. Piglets require an energy source, such as colostrum, to prevent starvation. Aggressive sows may require pain management and a sedative to help calm them down to allow nursing, or may require their litter to be removed entirely.
Laid On	<ul style="list-style-type: none"> It is common to have laid on pigs during farrowing and lactation. 	<ul style="list-style-type: none"> Create a creep area — a warm bedded area (e.g. heat lamps/mats) — a slight distance away from the sow. Install crush rails. Keep bedding shallow. Assess, treat, or euthanize injured, laid on piglets.

08

Disease Prevention

KEY POINTS

- ▶ Change your boots prior to entering areas where you house pigs.
- ▶ Allow no contact with strangers or persons who have had contact with other pigs or visited another pig farm in the previous 48 hours (7 days for visitors coming from foreign countries).
- ▶ Never feed meat, human food waste, or table scraps (that may have come into contact with meat products) to your pigs.
- ▶ Do not source animal feed from outside the country.
- ▶ Establish a relationship with a veterinarian.

8.1 PRINCIPLES

Biosecurity includes any measure that prevents infectious disease, pests, and other biological threats from:

- ▶ Getting into your farm and infecting your pigs,
- ▶ Reproducing on your farm and infecting your pigs, and
- ▶ Spreading between groups of animals on the farm.

8.2 WORKFLOW

- ▶ Monitor all pigs at least daily.
- ▶ Wear separate clothing and footwear when working with the pigs. Place clothing and footwear at the barn entrance/near the pens for easy access.
- ▶ Wash hands with soap and warm water (or sanitizer) before entering and after leaving livestock areas.
- ▶ Work with the youngest and most susceptible animals first.
- ▶ Check hospital/sick pens last.

A Veterinarian is a Key Team Member

Veterinarians are an excellent source of information on biosecurity, the care of pigs, and minimizing disease risks. They can help you create a practical biosecurity and herd health plan specifically tailored for your farm. For help finding a swine veterinarian in your region, contact your provincial pork organization or government agriculture department. See [Page 5](#) for contact info.

8.3 VISITORS

- ▶ Signage can be used to prevent unauthorized access to your farm.
- ▶ Farmers should accompany all visitors.
- ▶ Keep extra footwear, outerwear (e.g. coveralls, smocks), and hand sanitizer available for visitors.
- ▶ Determine if, when, and what types of farms visitors have been to prior to your farm. Restrict visitor access to your animals if the visitors have had recent (within 48 hours) contact with livestock (7+ days for international visitors).



8.4 FEED AND WATER SOURCES

- ▶ Purchase feed and feed ingredients from reputable sources. Avoid purchasing feed from international sources.
- ▶ Store feed securely. Keep feed pest-free and dry. Cover feed bins and feed systems to reduce the chance of contamination from wildlife and rodents.
- ▶ Sweep up feed spills.
- ▶ **Never feed human food waste or meat to your pigs!** If you feed your pigs fruit and vegetables, make sure it has never entered a kitchen or been in contact with meat or products of animal origin. Never feed food waste if there was ever a possibility of meat or meat product contamination.



8.5 INTRODUCTION OF NEW STOCK

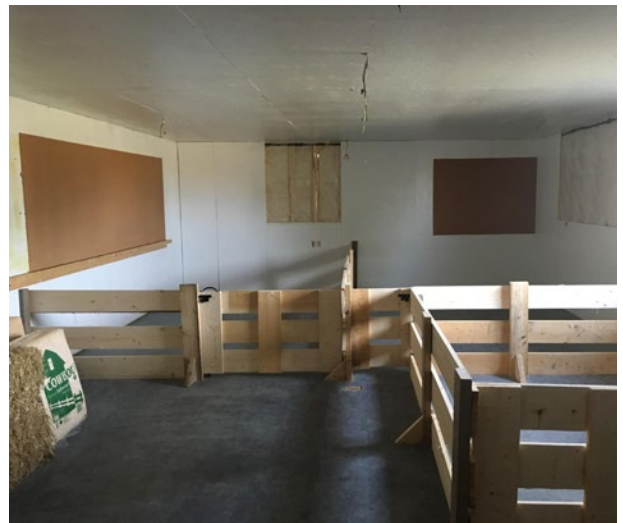
- ▶ This is the most likely way for introducing disease into your farm. Consult with a veterinarian prior to introducing new pigs to your herd.
- ▶ Avoid purchasing pigs from markets and auctions.
- ▶ Purchase pigs from a single source with a known health status. Encourage your veterinarian to consult with their veterinarian, if possible.
- ▶ Have a quarantine area (pen) for newly introduced pigs.



▶▶ Pest-resistant feed bunk equipped with a hinged cover that pigs can lift with their snouts to feed.



▲ This example is in a converted horse stall, but a quarantine pen could also be outside, as long as adequate shelter and bedding are provided and it prevents nose-to-nose contact with your other pigs.



8.6 QUARANTINE

- ▶ The area should be a separate pen that prevents nose-to-nose contact with your other pigs. Refer to [Section 3.8](#) for pen design.
- ▶ Four or more weeks will allow time for a proper assessment of health, condition, and recuperation from transport or illness.
- ▶ Observe animals for any abnormal behaviour and signs/symptoms of disease. If you notice unusual behaviour or symptoms, call for a veterinary inspection or tests.

Quarantines are an important part of maintaining a healthy herd, especially if your operation includes breeding stock.

8.7 HERD HEALTH

- ▶ Separate sick pigs. House them in a hospital pen. Refer to [Section 3.8](#) for pen design.
- ▶ Contact a veterinarian when livestock appear sick, mortalities are high, or production drops off without apparent reason (e.g. reduced growth rate, sows abort litters).
- ▶ Vaccinate as recommended by your veterinarian (see [Section 9](#)). Specifically look at vaccination programs for parvovirus and erysipelas.
- ▶ Internal parasites (worms), predators, sunburn, and heat stroke can have an impact on outdoor-raised pigs. Speak with your veterinarian about control strategies (see [Section 9](#)).
- ▶ Keep records of treatments and veterinary care.
- ▶ Any diagnostic testing must be managed through your veterinarian.

8.8 MORTALITIES

- ▶ Remove deadstock from the pig pens immediately. This reduces disease from spreading from the carcasses to the other pigs.
- ▶ Contact your veterinarian when unusual or unexpected death occurs.
- ▶ Dispose of deadstock appropriately (burial, incineration, composting) according to provincial and municipal laws. Secure it in a way that does not attract scavengers.
- ▶ Clean and disinfect equipment used to move deadstock.



8.9 FENCES

- ▶ Fence your pig pens to keep the pigs in and keep wildlife (especially predators) out, and preferably to prevent nose-to-nose contact between the wildlife and your pigs.
- ▶ See [Section 3.4](#) for more information on fencing.

8.10 CLEANING AND MAINTENANCE

- ▶ Indoor pens and shelters should be completely emptied, cleaned, disinfected, and dried at least annually.
- ▶ Pastures should be rotated and allowed to rest.
- ▶ Store manure where it will not contaminate water sources (wells, water bodies).
- ▶ All equipment that comes into direct contact with livestock should be cleaned and disinfected periodically, including feeders and waterers.
- ▶ It is best to have dedicated equipment for use with your pigs only. If sharing equipment with other farms, make sure to clean, disinfect, and dry equipment before using on your farm.

8.11 RODENT CONTROL

- ▶ Keep feed in tightly closed containers and clean up spilled feed.
- ▶ Use traps and tamper-resistant bait stations as required. Ensure pigs cannot access the bait, as it is poisonous, could kill them, and will contaminate their meat.
- ▶ Drain or remove standing water whenever possible.



▶ Maintaining a clean and organized feed room will go a long way in reducing rodent problems.

09

Swine Health and Well-Being

KEY POINTS

- ▶ Learn the basics of pig behaviour and normal appearance so you can more easily recognize signs of illness, injury, or disease.
- ▶ Effective disease management involves three steps: prevention, identification, and treatment.
- ▶ A vaccination and parasite control program is essential in outdoor production.
- ▶ Biosecurity is the first step in disease prevention.
- ▶ Develop effective herd health and disease management protocols with your veterinarian.

9.1 PRODUCT TERMINOLOGY

TERM	DESCRIPTION
Vaccine	Given to stimulate the immune system and provide protection against specific viral and bacterial pathogens
Dewormer	To kill internal (worms) and external (mites) parasites
Antibiotic	Given to kill bacteria and treat bacterial infections
Anti-Inflammatory	Given to reduce pain and inflammation
Vitamin/Mineral	Supplemental vitamins or minerals

Most of these products require a veterinary prescription to purchase them (depending on your province's laws). Acquiring a prescription requires you to have a relationship with a veterinarian.

9.2 SIGNS OF POOR HEALTH

Understanding the difference between normal and abnormal signs of health is an important part of maintaining the best possible welfare for your pigs.

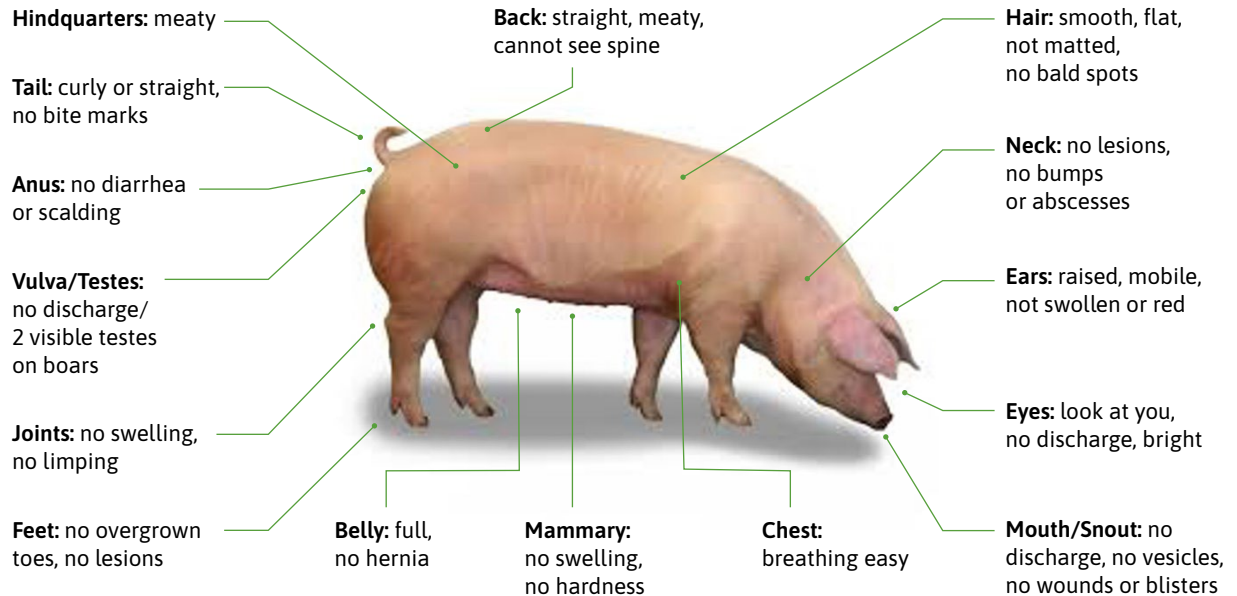
SIGNS OF POOR HEALTH CAN INCLUDE

- Laboured breathing
- Persistent cough
- Not eating
- Weakness/lethargy
- Laying down on side and paddling/convulsing
- Sudden death
- Trembling
- Depression
- Diarrhea
- Weight loss
- Rough hair coat
- Scratching/rubbing
- Skin discolouration
- Raw skin patches
- Pale skin and/or gums
- Head tilt
- Circling
- Swollen joints
- Lameness
- Unable to rise
- Abscesses, swollen areas
- Open wounds
- Bloody protrusion from back end (rectal prolapse)

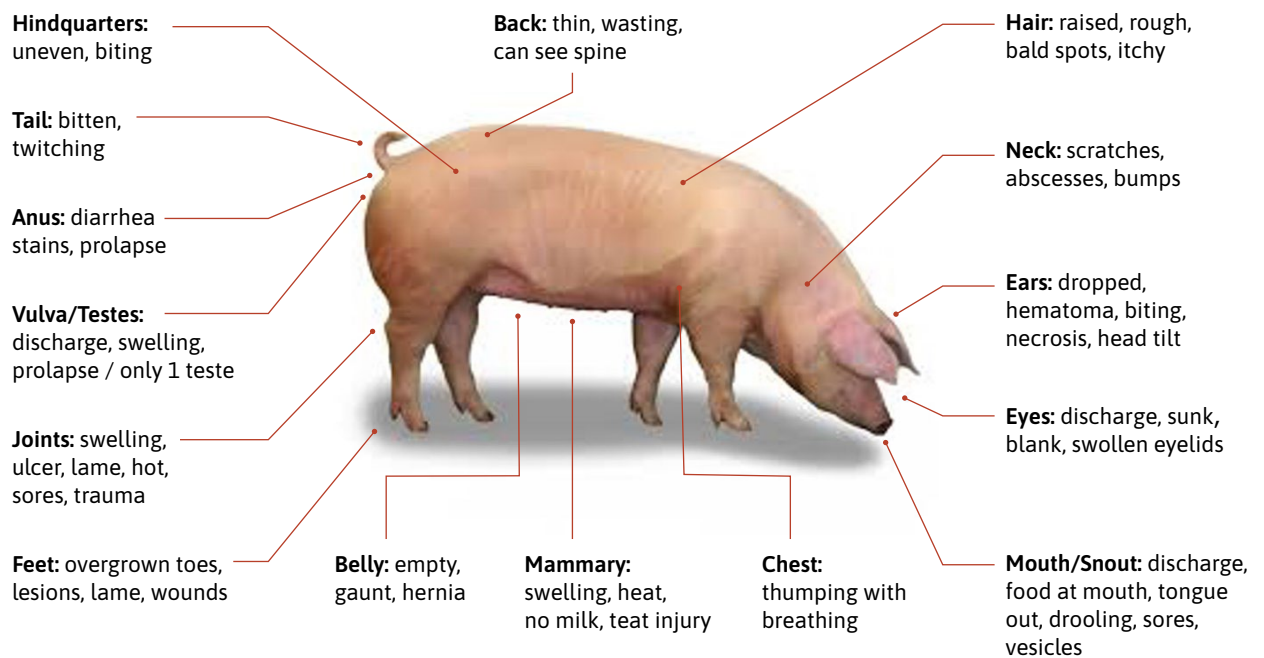
Recognize Normal vs. Abnormal

NORMAL AND ABNORMAL CLINICAL SIGNS

Normal expected signs



Abnormal signs which should raise concern



Source: Adapted from Manual for Pig Rearing in Uganda

9.3 HERD HEALTH PROTOCOLS (consult with your veterinarian to develop)

- ▶ Vaccination and deworming
- ▶ Prevention and treatment of disease
- ▶ Biosecurity
- ▶ Euthanasia
- ▶ Breeding and farrowing

Working with a veterinarian is an important step, as they will provide guidance in establishing protocols that are specific for your operation. For help finding a swine veterinarian in your region, contact your provincial pork organization or government agriculture department. See [Page 5](#) for contact info.

9.4 TREATMENT PROGRAM

There may come a time when you need to treat one of your pigs for illness or injury. All antibiotics require a prescription written by a veterinarian with whom you have a relationship. It is important to have treatment protocols established with your herd veterinarian and have some medication on hand for emergency situations. You should work with your veterinarian on how to administer treatments.

9.5 MEDICAL SUPPLIES AND EQUIPMENT

Being properly prepared by having required supplies on hand to address health issues is important for the welfare of your pigs.

- ▶ A medical kit should include:
 - Thermometer
 - Medical gloves (e.g. latex or nitrile)
 - Needles and syringes (1 mL - 20 mL) of varying sizes
- ▶ Size of needle guidelines:

SIZE OF PIG	NEEDLE GAUGE	NEEDLE LENGTH (INCHES)
Adult (>125 kg)	16	1½
30-125 kg	16	1
20 kg	16 or 18	1 or ¾
10 kg	18	¾
5 kg	18 or 20	5/8 or ¾
Piglet	20	1/2 or 5/8

Source: [PigSAFE|PigCARE Producer Manual](#) - Canadian Pork Council - 2018

- ▶ Other supplies and equipment useful for treating pigs include:
 - Hog snare
 - Pig (sorting) board
 - Ear plugs
 - Injectable antibiotics (e.g. penicillin)
 - Injectable anti-inflammatory (e.g. meloxicam)
 - Electrolyte powder
 - Kaolin pectin, activated charcoal, and/or starch product
 - Needle extension tube (e.g. Slap-Shot®)

F-5: NEEDLE USAGE & INJECTION SITE

Guide to using needles on grower pigs

For efficient intramuscular injections and to avoid broken needles in meat:

Never:

- ✦ Straighten a bent needle
- ✦ Use a chipped needle


Always:

- ✦ Prefer metal tips. Plastic tips are more fragile.
- ✦ Choose the appropriate needle length and gauge (see chart)
- ✦ Use detectable needles
- ✦ Inject a maximum of 10 pigs per needle
- ✦ Have a marker and spare needles when you do your rounds
- ✦ Dispose of dirty or broken needles safely

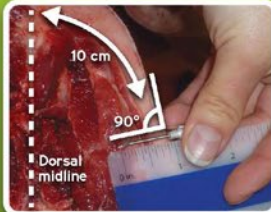
Needle selection chart

Animal weight	5 kg	10 kg	20 kg	30 kg	50 kg	75 kg	125 kg
Length	1/2"	5/8"	3/4"	1"	1"	1"	1"
Gauge	20G	18G	16G	16G	16G	16G	16G

Note: In the chart, green bars indicate 'Ideal' needle length/gauge and red dotted bars indicate 'not recommended'.



90° Injection angle



Injection site:

- ✦ Closer to the ear than to the shoulder
- ✦ At least 10 cm from the dorsal midline for pigs over 25 kg


If a needle breaks:

- ✦ **Euthanize the pig OR ↓**
- ✦ **Identify the pig with a color label and...**
 - ➔ **Piglets**
Alert your piglet buyer and the transporter **at time of transfer***
 - ➔ **Slaughter pigs**
Immediately alert: the Marketing department


At loading*:
Alert the transporter

At unloading*:
Alert the slaughterhouse staff


* Keep proof on your copy of the invoice




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CANADIAN PORK
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April 2017

9.6 VACCINATION GUIDELINE

The development and implementation of a vaccination program will go a long way to ensure high herd health. The following table provides some basic guidelines on vaccinations you should consider for your herd.

Vaccine Program

WHO	PATHOGENS	PRODUCT EXAMPLES	WHEN	WHY
All Pigs	Erysipelas	<ul style="list-style-type: none"> ER Bac Plus® OR <ul style="list-style-type: none"> Combo products 	<ul style="list-style-type: none"> Weaning Boost at 6 months To new pigs 	Prevent erysipelas aka “diamond skin disease”
All Pigs	Clostridial bacteria +/- tetanus	<ul style="list-style-type: none"> Ultrachoice® Covexin® Plus 	<ul style="list-style-type: none"> Weaning Boost annually To new pigs 	Prevent black leg, sudden death, and septicemia
All Pigs	Circovirus type 2	<ul style="list-style-type: none"> Circoflex® Circumvent G2® Fostera® 	<ul style="list-style-type: none"> Weaning To new pigs 	Prevent wasting disease/failure to thrive
Breeding Stock	Parvovirus, leptospirosis, erysipelas	<ul style="list-style-type: none"> Magestic 7® Farrowsure® GoldB Comes in COMBO	<ul style="list-style-type: none"> 5 and 3 weeks pre-breeding OR <ul style="list-style-type: none"> Every 6 months to all breeding stock 	Prevent abortions, mummies, stillborns, and failed conception
Pregnant Gilts & Sows	E.coli, clostridia, +/- rotavirus	<ul style="list-style-type: none"> Prosystem RCE® Litterguard® 	<ul style="list-style-type: none"> GILTS 6 and 3 weeks pre-farrow SOWS 3 weeks pre-farrow 	Prevent scours in piglets through protection from sow

The list of product examples is not exhaustive but lists some of the products approved for use in Canada.

9.7 CONTROLLING PARASITES

- ▶ Raising pigs outdoors substantially increases the chances of parasite problems due to:
 - Favourable conditions for growth and survival of parasites in the environment.
 - Contact with wild animals – they can be a potential reservoir or intermediate host of parasites.
- ▶ Parasite control involves understanding their life cycle and using procedures and dewormers to break the cycle of infection and prevent the spread to other pigs.

What is a Parasite?

A parasite is an organism that requires a host to survive. Two categories of parasites include: external, which live on or in the skin, and internal, which live inside the body of the pig, including the kidneys, liver, lungs, bloodstream, and digestive tract.

In order to minimize the impact of parasites, you should take the following steps:

- ▶ Clean, disinfect, and dry pens/barns/shelters in between batches of pigs, and at least annually.
- ▶ Eggs of intestinal worms (e.g. *Ascaris suum*) may remain infective in soil for many years.
 - Use well-drained pastures.
 - Rotate pastures or paddocks frequently (see [Section 4](#) on pasture management).
- ▶ Develop a deworming and/or sampling protocol with your veterinarian.
 - A veterinarian is likely to recommend deworming at least twice a year, and a more tailored protocol for feeder pigs in relation to your parasite burden.
 - Some veterinarians may recommend a fecal exam to determine worm levels and to measure the necessity of more or less frequent deworming.

When should I de-worm my pigs? (General guidelines)

- ▶ Treat newly purchased pigs with a deworming product while in quarantine.
- ▶ Treat all pigs in the herd twice a year for routine parasite prevention.
 - Always follow label directions for treatment.
 - Ensure you meet the correct dose and drug withdrawal times prior to slaughter.
 - Herds with breeding stock should deworm sows 1 to 2 weeks prior to farrowing.
- ▶ Consult with your veterinarian in developing a deworming plan specific for your operation.

Breaking the Cycle

While pasture rotation can be helpful, deworm your pigs to ensure effective parasite control.

Dewormer Program

WHO	PATHOGENS	PRODUCT EXAMPLES	WHEN	WHY
All Pigs	Mites, lice, roundworms, threadworms, lungworms	<ul style="list-style-type: none"> • Ivermectin® • Dectomax® 	<ul style="list-style-type: none"> • Weaning • Going into spring • Going into fall • 3 weeks pre-farrow 	Preventative health and food safety
All Pigs	Tapeworms, whipworms, roundworms, hookworms	<ul style="list-style-type: none"> • Safeguard® (Fenbendazole) 	<ul style="list-style-type: none"> • Weaning • Going into spring • Going into fall • 3 weeks pre-farrow 	Preventative health and food safety

The list of product examples is not exhaustive but lists some of the products approved for use in Canada.

9.8 DISEASE MANAGEMENT

How is swine disease spread?

- ▶ Diseased swine or healthy swine incubating disease
- ▶ Other animals, e.g. wild boar/pigs, farm animals, pets, wild birds and other wildlife, vermin, and insects
- ▶ On the clothing and shoes of visitors and employees moving from farm to farm
- ▶ In contaminated feed, water, bedding, and soil
- ▶ From the carcasses of dead animals
- ▶ On contaminated farm equipment and vehicles
- ▶ See [Section 8](#) for more disease prevention information

9.9 COMMON DISEASES OF OUTDOOR PRODUCTION

Several diseases are more commonly seen in outdoor production. Consult with a veterinarian early if you notice symptoms, especially symptoms you are unfamiliar with.

Failure to Grow

Clinical Signs

- ▶ Thin, not growing even though others are, spine protruding

Prevention

- ▶ Good nutrition, water, housing, and deworming
- ▶ Should vaccinate for circovirus type 2

Treatment

- ▶ Consult with your veterinarian



Photo: Dr. Ted Clark

Erysipelas “Diamond Skin Disease”

Clinical Signs

- ▶ Red to purple, raised diamond lesions on skin, possible lameness, possible red ears

Prevention

- ▶ Vaccinate for erysipelas

Treatment

- ▶ Requires antibiotics



Photo: Dr. Kelsey Gray

Parasites

Clinical Signs

- ▶ Poor growth, hairy, scabby skin, diarrhea, pot bellied and spine protruding

Prevention

- ▶ Combo dewormer (Ivermectin® and fenbendazole)
- ▶ Consult with your veterinarian for alternatives

Public Health

- ▶ Some parasites can remain in the meat and become a risk to human health if the meat is not handled or cooked properly

Treatment

- ▶ Combo dewormer (Ivermectin® and fenbendazole)
- ▶ Consult with your veterinarian for alternatives



Photo: Dr. Martine Denicourt

Lameness/Swollen Joints

Clinical Signs

- ▶ Limping, walking on elbows, abnormal gait, swollen joint, or clubbed foot

Prevention

- ▶ Hoof trimming, good pasture ground, proper mineral/vitamin supplementation

Treatment

- ▶ Anti-inflammatory and may need antibiotics as well
- ▶ Possibly extra bedding (soft ground)
- ▶ May need hoof trimming



Photo: Dr. Kelsey Gray

Septicemia

Clinical Signs

- ▶ Red/purple ears, possibly red bellies/udders/hind legs, possibly shaking/tremoring, not eating

Prevention

Good hygiene, proper feed/nutrition, proper housing/environment, not mixing new pigs from unknown health sources

Treatment

- ▶ Consult with your veterinarian
- ▶ Anti-inflammatory and may need antibiotics
- ▶ Separate from others and monitor the rest of the herd



Photo: Dr. Egan Brockhoff

Respiratory Disease

Clinical Signs

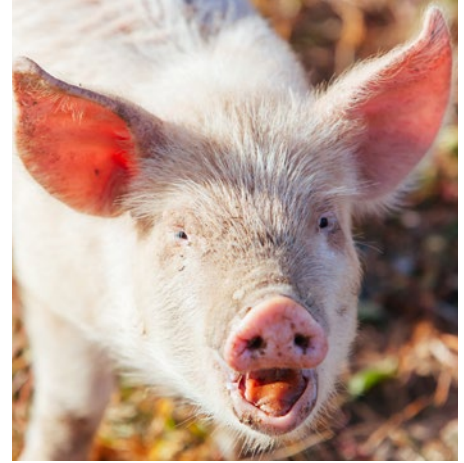
- ▶ Coughing, sneezing, breathing hard, standing with elbows protruding out, noisy breathing

Prevention

- ▶ Consult with your veterinarian – possible diagnostics needed and vaccination program

Treatment

- ▶ Consult with your veterinarian
- ▶ Anti-inflammatory and may need antibiotics
- ▶ Separate from others and monitor the rest of the herd



Piglet Scours

Clinical Signs

- ▶ Yellow/watery diarrhea from piglets, piglets getting skinny, piglets shivering, possible death in piglets

Prevention

- ▶ Warm, dry, and clean area for farrowing
- ▶ Provide extra heat at farrowing
- ▶ Vaccinate sows pre-farrow

Treatment

- ▶ Kaolin pectin, activated charcoal, or starch products (e.g. potato starch)
- ▶ Electrolytes in dish
- ▶ Warmth for piglets
- ▶ Possible antibiotics
- ▶ Consult with your veterinarian if incidence is high in many litters



Photo: Dr. Egan Brockhoff

Salmonella or Ileitis

Clinical Signs

- ▶ Ileitis – signs can include diarrhea (can be bloody), poor growth, and sudden death in growing pigs
- ▶ Salmonella – signs can include diarrhea, poor growth, scouring in piglets, sepsis, and sudden death

Prevention

- ▶ Vaccination for ileitis
- ▶ Vaccination for some strains of salmonella
- ▶ Proper washing, disinfection, and drying of environment and equipment used with pigs

Public Health

- ▶ Salmonella can be a risk to human health
- ▶ Always wash your hands when working with pigs

Treatment:

- ▶ Requires antibiotics



Photo: Photo: Dr. Kelsey Gray

Clostridial Disease

Clinical Signs

- ▶ Signs can include sudden death, skin necrosis, bloody diarrhea, sepsis

Prevention

- ▶ Vaccination

Treatment

- ▶ Requires antibiotics



Photo: Dr. Kelsey Gray

Mineral Deficiency

Clinical Signs

- ▶ Most common is iron deficiency in piglets (can lead to pale piglets, anemia, death, and can look like pneumonia)

Prevention

- ▶ Give all piglets 200 mg iron dextran before 4 days of age
- ▶ Add a vitamin/mineral supplement to all pig rations if not feeding a complete feed

Treatment

- ▶ Consult with your veterinarian
- ▶ Supplement



Photo: Dr. Martine Denicourt

Note

Contact a veterinarian immediately if you notice higher than expected mortality, scouring leading to death in piglets, any vesicles/blisters on hooves or nose, or if something does not feel right!

9.10 REPORTABLE SWINE DISEASES IN CANADA

If you see unusual clinical signs (symptoms) in your pigs, do not move your pigs off farm; call a veterinarian immediately. It is your responsibility to recognize and report foreign animal disease (FAD) to your veterinarian.

Federally reportable diseases	For more information, visit the Canadian Food Inspection Agency (CFIA) website on reportable diseases for terrestrial animals.
Provincially notifiable diseases	Each province has its own notifiable disease list. It is your responsibility to know which diseases are reportable in your province. Visit your provincial ministry of agriculture website for more information.

When should I contact my veterinarian?

- ▶ There is a high number of sick or dead pigs.
- ▶ Pigs become sick or die of unknown cause.
- ▶ You notice severe and/or bloody diarrhea.
- ▶ You notice nervousness or behaviour changes.
- ▶ You notice a severe hacking cough.
- ▶ Pigs are lethargic, listless or depressed.
- ▶ There is a rapid spread of signs/symptoms.

10

Euthanasia and Deadstock

KEY POINTS

- ▶ Euthanasia planning is essential — work with your veterinarian to develop a plan and protocols.
- ▶ Euthanasia needs to take place in a timely manner with minimal pain, distress, and fear.
- ▶ Letting the pig suffer and “letting nature take its course” is unacceptable.
- ▶ Only use acceptable methods of euthanasia as outlined in the Code of Practice for the Care and Handling of Pigs.
- ▶ Dispose of deadstock in a timely and appropriate manner.
- ▶ Deadstock represents a source of pathogenic agents which can contaminate live animals and other farms.

10.1 EUTHANASIA PLANNING

Who

- ▶ Assign a skilled person to perform the euthanasia.
- ▶ Learn how to perform euthanasia from an experienced, skilled person (e.g. veterinarian).

What

- ▶ Determine the most acceptable method for the age and size of the pig.
- ▶ For guidelines on appropriate methods of euthanasia, refer to Appendix N in the [Code of Practice for the Care and Handling of Pigs](#).
- ▶ Firearms and captive bolt guns are common, acceptable methods.
- ▶ If using a firearm, pigs up to market weight require 300 foot-pounds of muzzle energy. Adult pigs (sows and boars) require 1000 foot-pounds.
- ▶ If using a captive bolt, it is best to snare the pig to keep its head steady.

When

- ▶ Recognize conditions when a pig is experiencing distress, pain, or suffering.
- ▶ Establish guidelines of when to euthanize.
- ▶ For help in deciding when to euthanize a pig, refer to [Figure 10.1](#).
- ▶ If pigs cannot be moved from their current position without causing them pain and suffering, euthanize them where they are.

Why

- ▶ To prevent prolonged pain and suffering when recovery is unlikely.

How

- ▶ Choose the appropriate restraint (see [Section 6.5](#)), euthanasia method, and method to confirm unconsciousness and death.
- ▶ Ensure euthanasia equipment is properly maintained and cleaned.
- ▶ Wear hearing protection (e.g. ear plugs) during the process.
- ▶ Euthanasia training materials are available through your provincial pork organization.

Treatment Guidelines

Guidelines suggest that pigs should show a significant improvement 24 to 48 hours after treatment if recovery is likely. If improvement is not observed in 48 hours, euthanasia is the most humane option.

Figure 10.1 Euthanasia decision tree

FACT SHEET 17

EUTHANASIA DECISION TREE

Use this decision tree when dealing with a pig that is sick, injured, in pain or suffering.

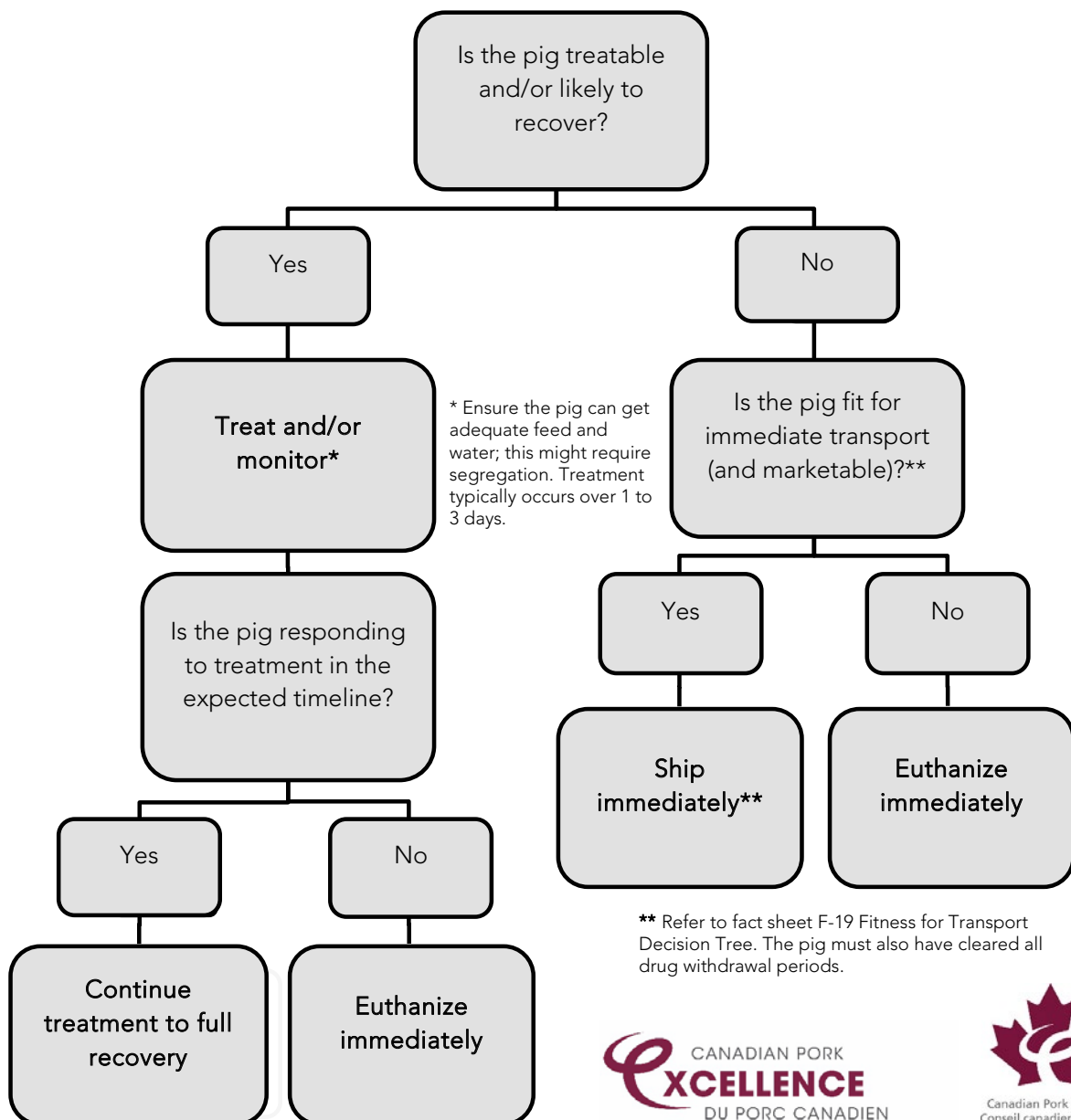


Figure 10.2 Methods of Euthanasia

FACT SHEET 18

METHODS OF EUTHANASIA



The following is a list of acceptable and unacceptable methods of euthanasia of individual animals for use on-farm, as well as methods that are only considered acceptable with the noted conditions. The chart is based on the information that was available at the time of publishing¹. For any method to be considered acceptable, it must render the animal immediately insensible and the animal must not return to sensibility prior to death. Individuals who euthanize pigs must be trained in the appropriate methods.

Weight of Pig →	< 2.3kg (< 5lbs)	2.3kg to 9kg (5lbs to 19.8lbs)	9kg to 32kg (19.8lbs to 70lbs)	32kg to 68kg (70lbs to 150lbs)	68kg to 120kg (150lbs to 264lbs)	120kg to 200kg (264lbs to 440lbs)	> 200kg (> 440lbs)
Euthanasia Method ↓							
Anesthetic Overdose ²	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
Blunt Trauma	Conditional ³	Conditional ³	Unacceptable	Unacceptable	Unacceptable	Unacceptable	Unacceptable
Electrocution	Unacceptable	Conditional ⁴	Conditional ⁴	Conditional ⁴	Unacceptable	Unacceptable	Unacceptable
CO ₂ and/ or Argon Inhalation	Conditional ⁵	Conditional ⁵	Conditional ⁵	Unacceptable	Unacceptable	Unacceptable	Unacceptable
Non-Penetrating Captive Bolt	Acceptable ⁶	Acceptable ⁶	Unacceptable	Unacceptable	Unacceptable	Unacceptable	Unacceptable
Penetrating Captive Bolt ⁷	Unacceptable	Unacceptable	Acceptable	Acceptable	Acceptable	Conditional ⁸	Conditional ⁸
Gunshot to the Head ⁹	Unacceptable	Unacceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable

¹ Further research under the oversight of a regulated research body may result in new, acceptable equipment and/or euthanasia methods that may be developed and become available during the life of this Code.

² Administered under the direction of a licensed veterinarian only.

³ Blunt trauma can be administered by grasping the hind legs of the piglet and striking the top of the cranium firmly and deliberately against a flat, hard surface. Alternatively, a sharp, firm blow with a heavy blunt instrument to the top of the head over the brain can be used. Sufficient force should be used to euthanize the piglet in one attempt. Alternative methods should be actively considered to ensure that criteria for euthanasia can be consistently met.

⁴ Electrocution of animals must be performed using properly-maintained, proven effective, purpose-designed equipment only. The electric current must flow through the brain first, resulting in insensibility and then through the heart which results in cardiac arrest. This can occur either simultaneously in one step, or by using a two-step method with electrocution to the head performed first.

⁵ Animals must be heavily sedated before introduction to gases. This form of euthanasia is acceptable only with properly-maintained, proven effective, purpose-designed equipment.

⁶ Non-penetrating captive bolt euthanasia may not be used unless the manufacturer specifies that the equipment is designed for the animal's weight range. A secondary method of euthanasia may be required depending on the type of equipment used, after the animal becomes insensible. For pigs at the heavier end of this weight range, a penetrating captive bolt will be more effective.

⁷ It is critical to ensure proper placement and aim of the penetrating captive bolt since the brain is relatively small and well protected. When using the captive bolt method, the frontal site is the only acceptable location.

⁸ Pigs ≥120kg (≥265lbs) in weight require a secondary method (e.g. reapply the captive bolt, pithing, bleeding) that is performed after the animal becomes insensible.

⁹ Proper placement and aim of the firearm is critical since the brain is relatively small and well protected. Gunshot can be applied to the frontal site, the temporal region, or from behind the ear directed diagonally toward the opposite eye. ⁹When performing euthanasia with a firearm, choosing a safe location to ensure that bystanders are safe is critical. All personnel should always be positioned behind the shooter.

2018

Source: [PigSAFE|PigCARE Producer Manual](#) – Canadian Pork Council – 2018

10.2 DEADSTOCK DISPOSAL

Proper Deadstock Disposal

- ▶ Work with your veterinarian to create a plan for deadstock disposal.
- ▶ Ensure that, during handling or storage for deadstock pick-up, there is minimal exposure of the dead animals to other livestock, or contamination of water sources or the environment with potential pathogens.
- ▶ Sanitize equipment used to dispose of the deadstock.
- ▶ Dispose of deadstock as soon as possible.
- ▶ Dispose of deadstock appropriately (burial, incineration, composting) according to provincial and municipal laws.
- ▶ Secure it in a way that does not attract scavengers.

Disposal Options

- ▶ Deadstock pickup service company
- ▶ Burial
- ▶ Compost
- ▶ Incineration

Need Help?

It is your responsibility to be aware of all approved deadstock disposal options in your province and municipality. Contact your provincial ministry of agriculture or rural municipality for more information.

11

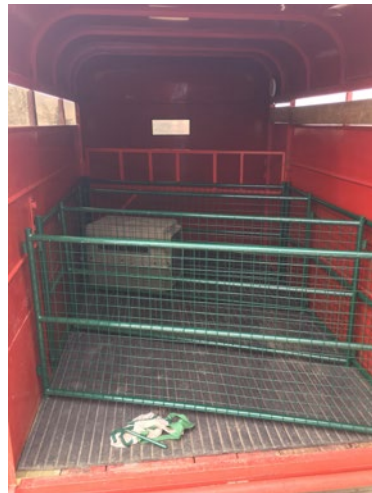
Transport

KEY POINTS

- ▶ Only pigs that are fit to be transported should ever be loaded onto a vehicle for transport.
- ▶ Schedule and plan transportation in order to minimize the amount of time pigs spend on a trailer.
- ▶ Properly designed loading facilities will reduce handler and pig stress and aid in pig movement.



▶ Standard stock trailer for transporting pigs, equipped with non-slip rubber floor and gates for separating individual pigs, or groups of pigs, during transport.



11.1 FITNESS FOR TRANSPORT

How do you evaluate fitness for transport?

- ▶ Evaluate weather and time spent on trailers for each trip.
- ▶ In very cold weather:
 - Ensure the trailer is relatively draft-free.
 - Provide additional bedding (e.g. straw, shavings).
 - Provide enough space to prevent animals from touching cold metal.
- ▶ In warm weather:
 - Ensure there is sufficient air movement to keep the animals from overheating.
 - Do not crowd pigs on the trailer.

If you are questioning if a pig should be loaded, it likely should not. Federal law mandates which animals are considered unfit to be transported and those (compromised) animals that need special measures to be transported.

FACT SHEET 19

FITNESS FOR TRANSPORT

PIGS FIT FOR TRANSPORT

Fit pigs are completely sound. Some limited conditions still allow the pigs to be transported without special measures, such as:

Minor hernia / rupture

- No open wound, ulceration or obvious infection
- Does not cause pig to show signs of pain or suffering
- Does not touch the ground
- Does not impede movement (does not touch the hind legs when the pig is walking)
- Does not swing while the pig is walking (less than 15 cm in diameter)

Runt pigs

- Not very thin
 - No fever
 - Not compromised or unfit due to another condition
- (Best practice is to group runt pigs together in the same compartment)

Minor tail bites

- Minor wound, not very swollen and not causing pig to show signs of pain or suffering

Special measures include:

- Shipping to the nearest suitable place (cannot be an assembly or sales yard)
- Not removing feed, water or rest for longer than 12 hours
- Isolating it on the trailer by itself or with one other compatible pig
- Loading and unloading it individually, without using internal trailer ramps
- Additional measures to protect their well-being, such as extra bedding or loading last and unloading first

COMPROMISED PIGS FIT FOR TRANSPORT WITH SPECIAL MEASURES *

Injuries and wounds

- Acute penis injury
- Acute frostbite
- Minor rectal or vaginal prolapse (fresh or repaired, and not inflamed, bitten, torn or very swollen)
- Unhealed, swollen tail bite, but not causing pig to show signs of pain or suffering

Health status

- Unhealed castration
- Laboured breathing (noisy)
- Blind in both eyes
- Mild bloat, with no signs of discomfort or weakness
- Lameness or deformed since birth (with no signs of pain)
- Sow in peak lactation, with full, swollen udder, likely painful in transport

Lameness

- Can rise and walk without assistance on all four legs
- Imperfect walk (e.g. any limp), but pig is not reluctant to walk and does not show halted movement

Moderate hernia / rupture

- More than 15 cm in diameter and swings when the pig walks

PIGS UNFIT FOR TRANSPORT *

Pigs that have a fever or are showing signs of pain or suffering should never be transported.

* "Unfit" conditions always overrule "compromised" conditions

Severe hernia / rupture

- Has an open wound, ulceration or obvious infection
- Causes pig to show signs of pain or suffering
- Touches the ground
- Impedes movement (hind leg(s) touch the hernia when the pig is walking)

Lameness

- Unable to rise or remain standing without assistance
- Unable to put weight on a leg
- Halted movement or a reluctance to walk (in pain or suffering)

Injuries and wounds (including tail bites)

- Wound that bleeds a lot
- Wound that causes suffering
- Wound that prevents pig from moving without assistance
- Wound that causes distress or exhaustion
- Pig in shock or dying
- Broken bones, affecting mobility
- Prolapsed uterus
- Severe rectal or vaginal prolapse (inflamed, bitten, torn or very swollen)

Health status

- Signs of a fever (temperature greater than 40°C)
- Very thin (emaciated)
- Laboured breathing, exhaustion or distress
- Signs of dehydration, heat stress or cold stress
- Stressed pig syndrome (trembling, difficulty breathing and/or discoloured skin)
- Bloat with signs of discomfort or weakness
- Sow that is 100+ days pregnant
- Sow that has farrowed in the last 48 hours

It is possible for other conditions to render a pig as compromised or unfit for transport. For more information, contact your provincial pork organization or your nearest CFIA area office, or visit CFIA's website: inspection.gc.ca/humane.

FACT SHEET 19 FITNESS FOR TRANSPORT

RECOMMENDATIONS – AT THE FARM

Below are the on-farm recommendations for organizing the transport of compromised pigs. These approaches optimize the work of all personnel involved.

During production, a producer should:

- Identify problematic cases early
- Segregate and treat the pig(s) as soon as possible
- Decide whether to transport the pig(s) before they become unfit for transport
- Immediately euthanize pigs that do not respond to treatment

Prior to shipping, a producer must:

- Inform the transporter of possible compromised pigs while planning the transport to slaughter
- Talk about the compromised pig(s) with the transporter BEFORE loading
- Never hide an at-risk pig's condition from your transporter

A transporter must:

- Evaluate if a pig will be able to move unassisted on its four legs once at its destination
- Not load a compromised pig if its condition is likely to worsen as a result of transport
- Make the final decision whether or not to load the compromised pig(s)
- Isolate compromised pigs in an appropriate compartment (maximum of 2 pigs)
- Transport compromised pigs directly to slaughter WITHOUT first going to a sales or assembly yard

Source: [PigSAFE|PigCARE Producer Manual](#) – Canadian Pork Council – 2018

Prior to Transport, Don't Forget!

- ▶ All farms must register their premises (farm). See **Section 2** for more information.
- ▶ All pigs require an identifying, approved herd mark (tattoo, ear tag, stencil) when leaving the farm to go to an abattoir, fair, or show.
- ▶ Premises registrations and herd marks can be assigned through your provincial pork organization or PigTRACE Canada.
- ▶ A properly completed transport manifest must be filled out and in your possession at all times during transport.

11.2 IDENTIFICATION TOOLS AND SUPPLIES

Confirm with your slaughter facility how they would like your pigs identified.

Depending on their requirements, you will need:

- ▶ PigTRACE-approved ear tags and a tagger,
- ▶ Tattoo ink and a (shoulder) slap hammer tattooer, or
- ▶ Food-safe animal spray paint and a stencil.

11.3 LOADING FACILITIES

- ▶ Unfamiliarity with an area, flooring, ramp, or vehicle can result in pigs being reluctant to move or be loaded.
- ▶ The ramp leading into the trailer should be at a gentle slope (it legally must be less than 20 degrees).
- ▶ Sides of the ramp should be smooth, solid, and high enough to prevent pigs from jumping off the ramp. This prevents injury (from sharp edges), prevents escape, and decreases visual distractions.
- ▶ The trailer opening/door must be wide enough that pigs will fit comfortably through it.
- ▶ Sufficiently bed the trailer floor with shavings, straw, or other bedding material.
 - This provides insulation and comfort during the trip and ensures the floor is not slippery.



▶ Modified loading crate to transfer pigs from the barn to the trailer with a forklift and without the need of a ramp.
(Note: Ensure the pigs cannot escape out the sides.)

12

Marketing and Slaughter

KEY POINTS

- ▶ Slaughter plants and abattoirs often require you to book your pigs a couple months in advance. Ensure you can reserve a slaughter date before you purchase pigs.
- ▶ Pigs going to slaughter off farm require an approved PigTRACE ear tag, tattoo, or stencil.
- ▶ Follow withdrawal times for any drugs or medications administered to your pigs prior to shipping or slaughter.
- ▶ Biosecurity at the slaughter plant is CRITICAL. This is a high-risk place for disease cross contamination.
- ▶ Contamination (or disease transmission) can occur during processing and from handling and consuming raw or undercooked meat products.

12.1 MARKETING

How long will it take to reach market weight?

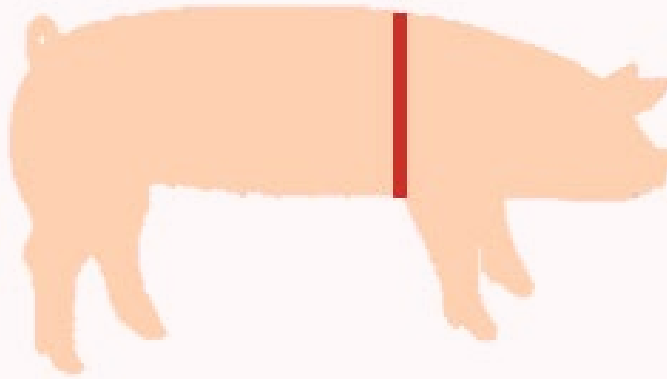
- ▶ How long it takes to reach market weight varies greatly and depends on the breed and feeding program.
- ▶ In outdoor systems, market hogs are usually ready to ship/slaughter between 7.5 months to one year of age.
- ▶ Typical market weight (live pigs) for small-scale operations will range between 75 - 100 kg.
 - The cut weight will be approximately 75 to 80% of the live weight.



Red Wattle pig close to market weight.

Estimating pig weight

- ▶ Use a weigh scale when possible.
- ▶ If a scale is not available, the following method will provide an adequate assessment:
 - Measure the pig's girth by placing a fabric measuring tape just behind front legs (see [Figure 12.1](#)).
 - This is easiest to do when pigs are occupied and standing still (e.g. eating at the feeder).
 - Use the graph in [Figure 12.2](#) to estimate pig weight, based on girth circumference.
 - Time to market weight (slaughter) varies greatly with the breed of pig. Heart girth measurements may need to be modified to accurately reflect your breed and management.



Helpful Hints

If a fabric tape measure is not available, use a piece of rope or string to measure the girth (marking the length with your fingers and then measure the string length away from the pig).

Figure 12.1 Heart Girth

Measure the circumference just behind the front legs. Try and take three separate heart girth measurements and use the average. This will provide a more accurate weight estimate.

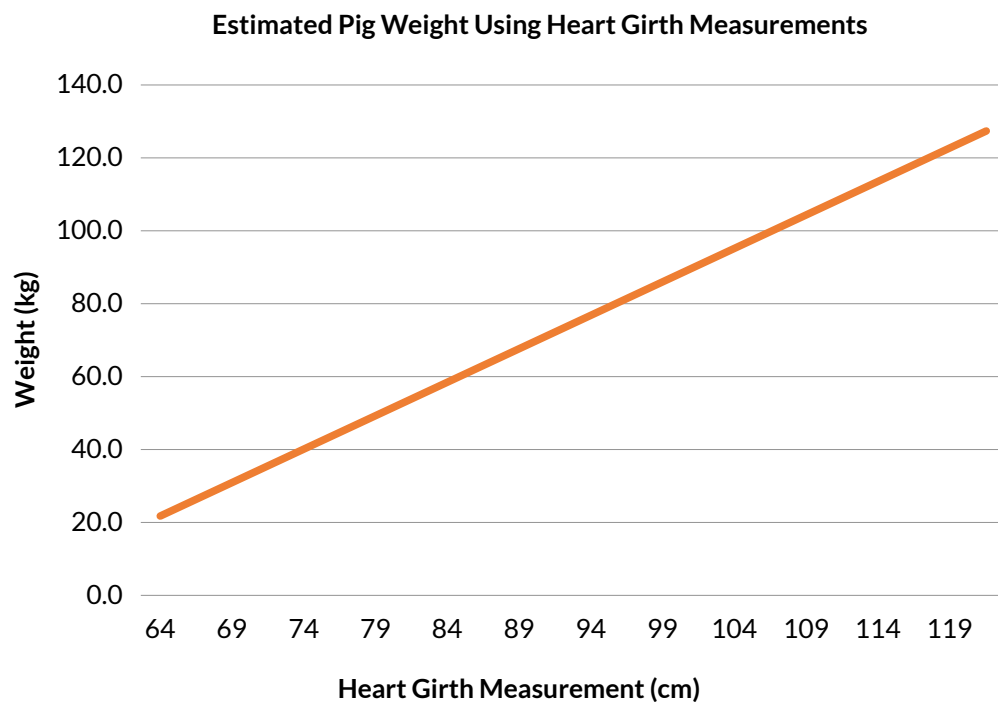


Figure 12.2 Graph to estimate pig's weight (in kg) from heart girth measurement (in cm).

12.2 SLAUGHTER

Pre-slaughter considerations

- ▶ Do not make slaughter plant arrangements at the last minute. Some require reserving your date months in advance.
 - Not all abattoirs slaughter and process hogs.
- ▶ Ask the slaughter plant about its ID preferences (i.e. ear-tagging vs tattoos vs stencil).
 - You will need to purchase the appropriate supplies for identifying your pigs:
 - » Ear tags and tagger,
 - » Tattoo ink and slap hammer, or
 - » Stencil and food-safe animal spray paint.
- ▶ Ensure that proper withdrawal times are met for any drugs or medications (injectable, feed, or water) prior to having your pigs slaughtered.
- ▶ Ensure pigs are healthy and fit for transport when having pigs slaughtered off farm. See [Section 11](#) for more information.
- ▶ Take appropriate measures to reduce stress.
 - Being too forceful when moving pigs (particularly when loading for slaughter) can result in a stressed pig and subsequent poorer meat quality.
- ▶ Implement a feed withdrawal 12 to 18 hours before the anticipated slaughter time (not 12 to 18 hours before transport).
 - Pigs without feed withdrawal may experience nausea in transport and have a higher risk of carcass contamination by stomach contents at slaughter.
- ▶ However, pigs should have access to water throughout the feed withdrawal period.
- ▶ Transport manifests need to be filled out and kept onboard during transport, and all pig movements need to be reported to PigTRACE within seven days. See [Section 2](#) and [Section 11](#) for more information.

Where can I slaughter my pigs?

SLAUGHTER TYPE	RESTRICTIONS
On-farm slaughter	Each province has specific requirements regarding the sale of product (meat) associated with on-farm slaughter. Check with your provincial ministry of health or agriculture regarding regulations that affect your operation.
Provincially inspected	You will be able to sell at various locations within your province, including restaurants, retail locations, and farmers' markets, in addition to the farm gate.
Federally inspected	Pigs can be sold to a slaughter facility without you having to market the pork. Certification under the Canadian Pork Excellence program is required (www.cpc-ccp.com/canadian-pork-excellence).

Need Help?

Locations of health-licensed, provincial and federally inspected slaughter facilities can be found on your provincial government's website.

12.3 SLAUGHTER PLANT BIOSECURITY

- ▶ Consider slaughter plant facilities dirty and an area of potential contamination.
 - Without proper care, you can bring disease back to your farm and your pigs.
- ▶ Wash your vehicle/trailer prior to loading your pigs for transport.
- ▶ Wear disposable boot covers and gloves at the slaughter plant.
 - Put them on while in your vehicle, without touching the ground at the slaughter plant.
 - Have footwear specific for the slaughter plant, not used at home.
- ▶ Be aware of the slaughter plant's biosecurity rules.
- ▶ Do not transport pigs that are sick.
- ▶ After leaving the slaughter plant, ALWAYS wash and disinfect your vehicle and trailer prior to arriving at your farm.
- ▶ When arriving home:
 - Avoid visiting your pigs on the same day you travel to a slaughter plant, if possible.
 - Change clothes and footwear prior to visiting your pigs.
 - Wash and dry clothes worn to the slaughter plant.

12.4 FOODBORNE DISEASE RISK

Contamination during processing

- ▶ Transmission through contact with blood and tissue (Streptococcus suis and erysipelas)
 - Transmission occurs through open wound contact with blood or tissue from an infected pig (e.g. knife cuts).
- ▶ Carcass contamination during processing (Salmonella, E. coli, and Campylobacter)
 - Commonly occurs through manure contamination of the processing area, or cutting the intestines during processing, releasing manure onto the carcass.
- ▶ Ensure you are wearing appropriate personal protective equipment (PPE) – gloves, masks, boots, goggles, and ear plugs to reduce contamination.

On-Farm Slaughter

Using slaughter plants is usually preferable, as they are well-equipped to identify carcasses not safe for human consumption. However, if you slaughter and process at home, it is very important that you take precautions to ensure the health and safety of the individuals handling and consuming the final product.



F8 | TOXOPLASMA

WHAT IS TOXOPLASMA?

Toxoplasma gondii is a parasite that can cause the disease toxoplasmosis in humans. The parasite can be transmitted from affected animals to humans and pigs.

Although the disease causes no symptoms in most people, toxoplasmosis can cause severe problems for people with a weakened immune system and for pregnant women.



WHY BE CONCERNED ABOUT TOXOPLASMA?

- *Toxoplasma* can cause illness in humans ranging from flu-like symptoms to death, miscarriage, congenital birth defects and blindness.
- It can also cause reproductive failure in sows, including spontaneous abortion.

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F9 | TRICHINELLA

WHAT IS TRICHINELLA?

Trichinella is a parasite that can cause the disease trichinellosis in humans. The parasite can be transmitted from affected animals to humans and pigs. Among the various species, *Trichinella spiralis* is the most significant one. It is a small roundworm and its infectious form, the larva, locates itself in cysts within the muscle of infected animals, including pigs.



WHY BE CONCERNED ABOUT TRICHINELLA?

- *Trichinella* is a food safety and public health risk, and the presence of trichinella is a barrier to trade.
- Although there is no recent evidence of *Trichinella* being present in the domestic pig population in Canada, the severity of its potential impact on human health means that we need to be ever-conscious of it and ensure that we have risk mitigation strategies in place to prevent its occurrence.
- The severity and duration of trichinellosis vary. If the infection is severe, patients may have difficulty coordinating movements and experience heart and respiratory problems. In very severe cases, death can occur.
- Less severe symptoms can include nausea, diarrhea, other gastrointestinal issues, fatigue, fever, flu-like symptoms, swelling of the face and eyes, aching joints and muscle pains.

2018




Source: [PigSAFE|PigCARE Producer Manual](#) – Canadian Pork Council – 2018

Contamination prior to processing

- ▶ Always wash your hands before and after handling pigs.
- ▶ The four most common parasites are pork tapeworms (*Tenia solium*), large roundworms (*Ascaris suum*), *Trichinella*, and *Toxoplasma*. *Trichinella* and *Toxoplasma* can live in cysts in the meat and are infectious to humans if consumed.
- ▶ Feeding food waste or garbage to pigs is a risk factor for *Trichinella*. This is one of the reasons this practice is illegal in Canada.

What can I do to avoid contamination?

- ▶ Remove dirty clothing and boots prior to entering the house.
- ▶ Wash your hands before and after handling raw meat or handling pigs.
- ▶ Use cut-proof gloves when slaughtering or processing.
- ▶ Properly clean and disinfect all equipment used for processing.
- ▶ Fully cook all pork products. Cooking pork to the recommended (end) internal temperature of 71°C (160°F) will ensure any internal parasites are killed during the cooking process.
- ▶ Avoid consuming raw or undercooked meat products.



Canadian Association of Swine Veterinarians
Association Canadienne des Vétérinaires Porcins

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