

How Pigs are
Raised



Pig farmers care

for their animals

365 days a year.

This little piggy went to market.

Farmers know that responsible and humane care is important to the well-being of pigs. They know from experience that a content and healthy pig also makes good economic sense. After all, raising pigs is a farmer's livelihood, one that will support him and his family for years to come. Farmers follow recommended codes of practice, complete how-to manuals that help them provide all the important elements of proper animal care. Saskatchewan's pig industry has been a leader in promoting welfare practices and researching new and better ways of doing things.

It's the Law!

Saskatchewan's Animal Protection Act 1999 requires farm animals and pets to be treated humanely. Regulations under the Act draw upon various codes of practice to protect livestock.

BUT FIRST, A GLANCE BACK....

How were pigs raised 30 or 40 years ago?

Until the 1950's, most farms grew a bit of everything, including a few sows with litters of piglets every spring and fall. Hogs were raised for home use or as a sideline to grain, beef or dairy farming. Most were kept primarily outdoors and in small shelters with straw bedding.



Farm families in Saskatchewan raise more than 2.4 million pigs per year.



Were these really the “Good Old Days”?

Raising pigs outdoors worked well when there were only a few pigs per farm, but even then there were problems with predators, disease and parasites. Productivity was low – only 15-17 piglets per sow each year. (Compare that with today’s average of 25+ piglets weaned per sow per year.) The sows crushed many piglets. It wasn’t a comfortable life for bigger pigs either. Frostbite on hairless ears, insect bites or sunburn were risks. Productivity, efficiency, herd health and sow comfort had a long way to go.

Improvements in technology and growth in farm size in the 1950’s brought in a period of specialization. The largest pig barn of that era housed between 50 and 100 sows. Bringing the animals indoors allowed farmers to monitor herd health, control breeding, care for the piglets and feed individual animals according to their needs.

In the last 20 years, hog farming has become even more specialized. Today, the average farm has more than 500 sows.

HOW HAS FARMING CHANGED OVER THE YEARS?

The first great revolution in farming was fuelled by the gas engine in the 1920’s. Tractors replaced horse, oxen and hand plows. What one farm could produce suddenly increased tremendously.

In the late 1940’s, science spurred a second farming revolution – chemicals were introduced which

could control insects, weeds, and fungi. Discoveries in breeding and management technologies meant dairy cows, which once produced 15 to 18 litres of milk per day, now produce over 30 litres per day. Significant productivity gains have also occurred in the pork industry along with a consumer-driven trend towards producing leaner cuts of meat.

Today, only 3% of Canadians farm and the average farm size is over 800 acres. Each farmer produces enough food to feed over 120 people for a year, and Canadians today spend about 14¢ per \$1.00 earned on groceries. That’s the benefit of improved productivity.

A PIG’S TALE...

Where are pigs raised?

Today, pigs are raised through their growth stages indoors in various kinds of specialized barns. A barn housing pregnant sows is called a gestation barn. A pregnant sow delivers her piglets in a farrowing room, which has supplemental heat and an appropriate floor surface for the sow and piglet. The piglets are raised in a nursery barn. Again, supplemental heat is provided.

There are specialized feeders and drinkers for the small piglets. Once the piglets grow to be 27 kgs (60 lbs), they are moved to a feeder barn. They will stay there for up to 18 weeks or until they reach a market weight of 113 kgs (248 lbs).

Some farmers raise hogs through the entire process in a “farrow to finish” operation; others simply buy weanlings or piglets and feed them

Newly weaned pigs
in a nursery pen.



to market weight.

Most pigs today are raised with fewer diseases than years ago. In the past, when pigs lived outside, they had parasites and trichinosis. Now, pigs live in facilities that have biosecurity programs such as a shower-in policy. Barns are sheltered, the environment is computer controlled, and water is treated and tested. This means that minimal medications are needed to keep pigs healthy. These “high-health” farms have restricted access and employees in these facilities shower in and change clothes daily to maintain high herd health. It is in the farmer’s best interest, both economically and from a swine welfare standpoint, to keep animals healthy.

The Breeding Barn

The Birds... and the Bees...
and Pigs



Pregnancy tests are
conducted by ultra-sound.

Young, unbred female pigs are called gilts. A gilt is usually 130 kgs (286 lbs) in weight when it is mature enough

for breeding. They are housed in groups of three to 25 pigs per pen in the breeding area. Gilts are called sows once they give birth. Male pigs, or boars, are penned individually, so they don’t fight with each other. For every 16 sows in a herd, a hog farmer usually keeps one boar. Pigs are very social animals, and sows are kept either in groups or alone in close contact with its neighbours.

When gilts or sows enter estrus in their reproductive cycles (about 21 days long), they are ready to be bred.

Boars are introduced into pens of females and will show great interest in sows in estrus. Farmers oversee breeding to ensure the sow is receptive and successfully bred.

Increasingly, producers are using artificial insemination (A.I.), which is gentle on the sows and can produce excellent pregnancy results.

Breeding area managers keep records of sow and boar performance on a computer program. Sows may be bred more than once to ensure conception before they are moved to the gestation area.

ANIMAL CARE FACTS: The Breeding Area

- Each sow is identified with a numbered ear tag. Health, reproduction, and breeding records are kept for each animal.
- Sow health is checked at least twice a day.
- Fresh water is available at all times; some pens are fed automatically, others by hand.
- When sows are brought to group pens, there may be some fighting as they establish a pecking order. Sows

Feeder pigs are fed a specially balanced mix of grains such as barley, wheat, corn, canola meal, soy and even peas and lentils.



should not be further mixed with other groups during breeding.

- It's important to keep the sows as stress free as possible to prevent litter loss.
- Producers keep floors clean by washing them down regularly with high-pressure hoses. Clean, dry, non-slip flooring minimizes injuries and helps keep the air fresh.
- Animals are moved in an orderly fashion through aisles with gates opened and closed to direct them.

GESTATION

The individual gestation stall system

Pregnant sows, also called “gestation sows” (non-lactating), are moved to individual stalls after breeding.

Farmers take care to minimize sow movement during the first 30 days of pregnancy because of a high risk of miscarriage.

The length of the sow's pregnancy is three months, three weeks and three days, or 115 days. Sows will usually have slightly over two litters of piglets each year.

In the gestation area, sow health is monitored at least twice a day. Sows are fed individually and offered water regularly. They can lie down comfortably, stand up or sit and walk a few steps forward and back. The stalls are cleaned daily.

Loose Sow Housing Systems

Most Saskatchewan farmers use gestation stalls. However, producers with a ready supply of straw and outdoor facilities are more inclined to keep a number of their sows in some form



Straw-based group housing system for sows.

of group housing system. Farmers cite sow aggression and welfare concerns, followed by cost concerns, as main barriers to adopting alternative housing systems. Extensive research into alternative housing systems is ongoing.

ANIMAL CARE FACTS: The Gestation Area

- Individual dry sow stalls reduce competition for food and prevent fighting or tail and vulva biting.
- They also help in reducing stress to the sow during the early critical stages of pregnancy.
- In stalls, sows can easily be examined individually for health and treated if necessary.
- Pregnancy tests are conducted by ultrasound and, if found negative, sows return to the breeding area. The ability to pregnancy test greatly increases farm productivity.

THE NOT-SECRET CODE... Is there a “better way” to raise pigs?

The answer is yes! It's found in the “Recommended Code of Practice for the Care and Handling of Farm Animals: Pigs”

Nursing piglets are kept warm under heat lamps in the farrowing or birthing room.



Scientists, humane societies, veterinarians, and farmers cooperated in writing this guide.

In addition, the Animal Care Assessment (ACA) program provides producers with a means to evaluate and improve animal care on their farms. All swine producers in this program must follow the code of practice. ACA pays special attention to ensuring that those caring for pigs are well trained and understand the importance of their role in providing the following things for their animals:

- Comfort and shelter
- Fresh water and a healthy diet
- Opportunity for reasonable movement and expression of most social and behavioural needs
- Appropriate light and flooring
- Prevention of abnormal behaviour, injury and disease
- Sound equipment

THE FARROWING BARN

Sows are moved in groups to farrowing or birthing rooms. Size of farrowing rooms vary to accommodate between 10 to 50 farrowing animals. A farrowing stall allows the sow about the same movements as a gestation stall and provides creep areas along either side for the piglets. Adjustable rails alongside the sow slow her movement when she lays down, thus protecting piglets from being crushed.

From the breeding records, the producer knows approximately when the sow is due to farrow – about 115 days after breeding. By using individual stalls, farmers can look after the individual needs of

each sow. Usually the farrowing room will be filled with a group of sows ready to give birth around the same time.

Once the sow begins to farrow, animals are closely monitored. If 15 minutes elapse between piglet births and an internal exam shows the birth canal is clear, the attendant may give oxytocin to stimulate contractions and ensure the piglet is born alive.

Farrowing is sometimes induced with prostaglandin at the due date to ensure that farrowing will occur with the worker in attendance. This procedure allows the farmer to assist the sow if necessary.

Shortly after birth, piglets will nurse. A heat lamp or pad and a warm farrowing room temperature ensure piglet comfort.

With today's careful management, the average litter size has increased to 11-13 piglets per litter, going as high as 16 per litter.

ANIMAL CARE FACTS:

Generally, each farrowing barn has three main areas: the breeding and gestation areas, the farrowing rooms and the nursery. All areas are carefully managed for lighting, ventilation and temperature to ensure maximum comfort for the ages, size, and life stages of the pigs. Before pigs are moved to a new area, rooms are thoroughly washed with hot, pressurized water, disinfected, and left to dry. Cleanliness helps keep pigs healthy and thriving.

Most pig farms today restrict public access to barns in order to minimize the risk of disease introduction.



PIGLET CARE

Once all sows in a farrowing room have farrowed, farmers will compare litters for numbers and size of piglets. They may decide to “cross-foster”. This involves switching piglets from one sow to another to ensure competition between piglets for teats is evened out. If done early, sows readily accept fostered piglets.

Farmers make sure all piglets receive colostrum, the antibody-rich first milk, so the piglets develop strong immune systems. The tips of the piglets’ tails are usually clipped between one to six days following birth to prevent tail biting when the piglets are older. With its tail docked, the piglet is less likely to allow its tail to be chewed to the point of injury.

When they are between three and six days old, piglets are injected with iron to prevent anemia. Male piglets are castrated. Studies are underway to look at ways of eliminating this procedure. Currently, all boars, other than those selected for breeding, are castrated to prevent a distinctive and unpleasant “boar taint” (smell) in the meat.

Piglets are moved from the farrowing rooms at a weaning age which can be anywhere from 18 to 28 days depending on the producer’s system.

The weaned piglets, or weanlings, are housed in nursery pens.

Farmers continue to provide very warm temperatures for the pigs. Weanlings are initially sorted by size and provided with fresh water and feed at all times. They will remain in nursery pens for five to

eight weeks. They will then be moved to a grow-finish area for another 18 weeks.

THE GROWER-FINISHER BARN

“Feeder pigs” are housed in groups of various sizes. In well-ventilated barns, pigs will instinctively select clean and dry areas for sleeping, resting and feeding. They will defecate in another area. Manure is routinely removed by the handler.

Feeder pigs are provided feed at all times. The feed is a specially balanced mix of grains such as barley, wheat, corn, canola meal, soy, and even peas or lentils. Feeding troughs are automatically filled when emptied. Clean water is supplied via “nipple drinkers” and bowl drinkers that the pigs can access at all times. Farmers perform a yearly water test.

To prevent pigs from bullying each other, producers often provide materials like straw, rope, chain or “toys” for the pigs to chew on.

Misting the pigs with cool water on hot days prevents discomfort.

Transportation and Handling

When pigs are market weight – about 113 kgs (248 lbs) – they are loaded onto well-ventilated trucks with appropriate bedding for transport to market. The number of pigs in the load is carefully calculated taking into consideration truck size,

Checking body condition is just one of the requirements under the Animal Care Assessment program.



travel distance, temperature, and pig comfort factors.

Many processing facilities now require drivers to have certification in the transportation and handling of livestock. A special swine transportation and handling trucker's course includes topics such as driver attitude, animal handling, biosecurity, emergency response planning and knowledge of Canadian legislation.

For more information on the transportation of pigs, contact the Saskatchewan Pork Development Board.

Speaking of cleanliness, what about the manure?

Most hog barns collect manure in holding pits beneath the barn. Floors are slatted so liquids and solids fall through to the pit. Barn workers regularly sweep and shovel pens and stalls to push the manure into pits. Floors, pens and walls are pressure washed and disinfected between each group of pigs. The pits are emptied routinely to an outside storage facility. The liquid manure is held in storage and applied to fields to feed crops. Hog manure is a valuable organic fertilizer and soil conditioner. Farmers follow provincial regulations to ensure manure is handled in an environmentally acceptable manner.

For more information on environmental stewardship programs, contact the Saskatchewan Pork Development Board.

ANIMAL CARE AND HEALTH

Do pigs get a lot of hormones and antibiotics?

In Canada, growth hormones are not used in pig production.

Weanling rations may contain some antibiotics to help young pigs thrive. Antibiotics in nursery feed help piglets fend off infections as they adjust from sows' milk to solid feed. To ensure a balanced diet, farmers also include vitamins and mineral supplements in the pigs' diet.

Most producers will eliminate antibiotic use in feed in the grow-finish phase. They will only treat animals that are sick. Farmers follow withdrawal times closely to ensure market pigs will be free of antibiotics before market.

In recognizing consumer demand for safe and wholesome food, Canadian farmers are producing pork that meets new national standards for food safety. For information on Canada's Quality Assurance® Program, contact the Saskatchewan Pork Development Board.

Most hog farms today restrict public access to barns in order to minimize the risk of the introduction of disease. It is in the farmer's and the pig's best interest to keep reliance on medication to a minimum.

The bio shelter feeder barn provides an alternative housing option.



ARE THERE ALTERNATIVES TO GESTATION STALLS?

Gestation stalls are used worldwide but they have been banned in some countries where producers are now required to house pregnant sows in groups. This has been a costly and difficult experience for farmers with some negative impacts on pig welfare as well.

Gestation stalls allow for easier management of health and feeding. The main disadvantage of stalls is that it restricts exercise for the sow. Animals can lie down, stand up and move back and forth, although they do not have space to walk or turn around.

Replacing gestation stalls with group housing systems is not a cure-all. Managing gestating sows is a specialized skill. Farmers will need to be trained to introduce new sows into established sow groups, thus avoiding fighting and potential reduction in litter sizes and farrowing rates. Research to address these challenges is underway in various countries including Canada.

Several programs have been set up to promote the development and



Weanlings are sorted by size and have fresh water and feed at all times.

use of sustainable systems and practices that meet the fundamental needs of pigs in all facets of the swine industry. These programs include representatives from the swine industry, animal welfare, animal research, veterinary medicine and government.

The challenge is to design practical and affordable alternative housing systems without compromising animal health, production or food safety.



Barns provide a comfortable computer controlled environment.

Lactating or nursing sows are fed two to three times a day.



THE FUTURE...

Western Canada's hog industry looks to the future as both a challenge and an opportunity. Our producers have been leaders in responsible environmental stewardship and animal care initiatives.

Farmers are innovators. They always find better ways of doing things. Current swine housing systems are continuously evolving to improve efficiency, herd health, and productivity. Farmers are committed to developing new alternatives and providing for increased welfare and comfort for their pigs.



Pig farmers follow a Code of Practice that outlines all the important elements of proper animal care.

REFERENCES:

The following publications, available through the Saskatchewan Pork Development Board, will be of interest for those looking for more in-depth information:

The Recommended Code of Practice for the Care and Handling of Farm Animals – Pigs

The Recommended Code of Practice for the Care and Handling of Farm Animals – Addendum – Early Weaned Pigs

The Recommended Code of Practice for the Care and Handling of Farm Animals – Transportation

A Strategy for Excellence: Canadian Quality Assurance Program

Animal Care Assessment, Animal Care at Work

Livestock and the Environment: Maintaining the Balance

Humane Handling of Compromised Pigs: Standard for Assessment

Saskatchewan Agriculture and Food Publications:

- *Frequently Asked Questions Regarding Livestock Operations*
- *Guidelines for Livestock Development*
- *Establishing and Managing Livestock Operations*
- *The Regulation of Intensive Livestock Operations in Saskatchewan*
- *A Strategy for Sustainable Manure Management in Saskatchewan*
- *Managing Manure as a Fertilizer*



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