

Section 3

HANDLING

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What do I need to consider when planning a handling system?

- A handling system is a set of inter-connecting working pens.
- How many sheep are needed to justify the expense of a handling system depends upon the need for handling, the cost of the system, and the handler's preference.
- Handling systems usually pay for themselves quickly.
- They can be constructed out of wood, steel or aluminum.
- They can be permanent or portable facilities.
- Build facilities utilizing the natural instinct and behaviour of sheep;
 - Sheep really panic on slippery floors – so provide non-slip flooring.
 - Avoid 90° corners which sheep cannot see around. Any corners must be curved allowing sheep to continually see where to go and see the animals ahead of them.
 - Sheep do not like to walk uphill, so avoid steep ramps when possible.
 - Facility should be built on level ground – never on a downhill slope.
 - Shadows, contrast in flooring and water puddling should be avoided in a handling facility as they will cause sheep to balk.
- Loading ramps, chutes, etc., are best facing north or south, not east or west.
- Ensure handling facility accommodates all required jobs – make a complete list of important jobs, including:
 - Shearing
 - Crutching
 - Sorting
 - Deworming
 - Vaccinating
 - Body condition scoring
 - Pregnancy scanning
 - Foot bathing
 - Weighing
 - Loading and sale of sheep
 - Foot trimming
- **Plan! Plan! Plan!** Consider the following when planning the layout of your handling facility:
 - Best location for the facilities – based on sheep behaviour.
 - Size of groups the facility will need to handle.
 - Amount of labour available for working the sheep.
 - Modification of existing facilities, new buildings or purchased portable yards.
 - Cost involved.



Plan! Plan! Plan!

What should be included in a handling facility design?

- Handling systems are comprised of low-density holding areas, high-density holding areas, forcing (or crowding) area, and handling chute (or race).

 **Handling systems are comprised of low-density holding areas, high-density holding areas, forcing (or crowding) area, and handling chute (or race).**

- **Low-density holding areas:**
 - Nearby pastures and laneways can be used as low-density holding areas.
 - These areas need to be secure enough to prevent escapes (particularly lambs) from one area to the next. Consider using net wire fencing with openings no larger than 15 cm by 15 cm secured to closely-spaced posts.
- **High-density holding areas:**
 - Composed of medium to strong fencing materials.
 - Density of two sheep in full fleece per 10 square feet allows enough room to drive the group into the yards while leaving space for gates to swing.
 - Particularly important that these areas are long and narrow so sheep flow easily into the rest of the handling facility.
 - If more capacity is needed, it's better to lengthen than widen.
- **Gathering pen:**
 - A large enclosed area.
 - Used to receive sheep prior to being put in the crowding pen.
 - Large enough to accommodate largest number of animals that will be worked at one time.
 - 5-6 square feet per ewe.
 - 3-4 square feet per lamb.
- **Forcing pens:**
 - Design to ensure even flow of sheep into handling chute.
 - Can also be used to select individual animals for treatment or to closely inspect them.
 - Can serve as a catch pen for small flocks.
 - Can be circular or rectangular.
 - Avoid square or triangular shaped pens that have corners where sheep will get "stuck".
 - Generally have swing gate that can be brought in behind the animals to crowd them into the chute.
 - Sides should be solid so that sheep are not distracted. Animals also feel safer if there is a barrier between them and the handlers.
- **Handling chute (also known as a raceway):**
 - Solid to prevent legs/horns being caught.
 - High enough to prevent jumping to a maximum of 36 inches.
 - Narrow enough to prevent animals from turning around (adjustable width for handling sheep versus lambs) – 14-20 inches, depending on breed size.
 - Sheep will usually move through in a single file.
 - All sheep in forcing area and in chute need to see animal ahead of them.
 - Front end of the chute should be kept open so that the sheep don't see a dead end – sheep must always think there is a way out.
 - Once chute is full, handler can stand outside of it and reach over to treat and handle the sheep.
 - Once all sheep have been worked, they are sorted and/or released, and the chute is refilled with sheep from the crowding pen, which in turn is refilled with sheep from the gathering pen.



- Length of chute varies by flock size but should be at least 8 feet long – ideally, it should be the length of at least five animals.
- Longer chutes can be divided with gates, which should be see-through.
- Curved chutes work best, but it must be a wide sweeping curve, as a tight curve will appear as a dead end to the sheep.
- Anti-backup devices can be installed to prevent sheep from backing or piling up. Slide gates are best – back-up devices that hang down will cause sheep to balk.
- Chute should not be taller than 36 inches, otherwise the handler won't be able to reach over it.
- At the chute end furthest from the force pen, there should be a cutting or sorting gate leading to holding pens, a loading ramp or back to pasture.

How can I use sheep behaviour to my advantage?

- Thorough understanding of behaviour is necessary in developing an effective method of handling sheep. Sheep are prey animals and will react as such. Handlers are viewed as predators.
- As prey animals, sheep have a very strong herd instinct. Isolation will cause great fear in sheep and they will react by attempting to flee any way possible. It is best to work sheep in a group. If you must treat one sheep, it is best to bring it in with other sheep.
- When frightened, sheep will panic and pile up on top of each other.
- As with other grazing prey animals, sheep have a very wide angle of vision – anywhere from approximately 190°-310° around them, depending on the amount of wool on their head.
- Like cattle, sheep have poor depth perception when their heads are up, making it difficult for them to navigate shadows, water puddles, grates or contrasts in flooring. The animals must stop and drop their head to determine depth.
- Sheep have excellent memories and do remember rough handling.
- Sheep are difficult to handle if forced to act in ways that aren't natural for them.
- Flight zone:
 - Flight zone is an animal's personal space. It is located all around the sheep and above them. Any place that is within their line of vision can be in their flight zone.
 - The flight zone is a response to visual pressure, so the handler must stand where the sheep can see them. Sheep have a blind spot directly behind them. The best place to stand is off to the side of the animal, within their line of vision.
 - When the handler is outside the flight zone, the animal will turn to face you – the animal is aware of the fact you are there, but is not motivated enough to begin to move away.
 - As soon as you enter the flight zone the animal will begin to move away. This is where you want to stay in order for the animal to move calmly. It is normally a matter of just one step and they will begin to move.
 - If you penetrate the flight zone too deeply the animal will panic and react in a frantic manner. This could include charging the handler or running into gates or fences. This is dangerous for both the handler and the animals.



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- Size of flight zone can vary based on the disposition of the animal, familiarity of the handler or facilities, current environment (i.e. lambs at foot), behaviour of the handler, injury or illness or previous experience.
- Sheep confined in small spaces have smaller flight zones than those housed in larger areas. This is because in smaller spaces the handler must be closer to the animals than in a large facility where the sheep feel there is a safer distance between them and the handler.
- Frequent gentle handling tends to diminish the size of the zone.
- Sheep without any flight zone are very difficult to work.
- **Point of balance:**
 - Point of balance is at the animal's shoulder.
 - Animals will move forward if the handler stands behind the point of balance. If the handler is in front of the shoulder, the animals will go backwards.
 - Sheep will usually refuse to move forward if they see people standing in front of them.
- **Moving sheep:**
 - Always move sheep slowly, calmly and quietly.
 - To keep sheep moving, make sure there's always a clear way ahead.
 - Sheep don't like visual dead ends – they don't move freely towards them.
 - Sheep move best from dark into light and generally dislike changes in light contrast.
 - Lighting coming up from under gratings make sheep uncomfortable because of their poor depth perception. Thus, gratings at woolshed doors should to be laid so the floor looks solid to the sheep.
 - If you don't have handling dogs, small groups of sheep can be trained to come on vocal commands or at the rattle of a bucket.
 - Most sheep will come if they think they are getting grain to eat.
 - If it's necessary to go out to the field to get the sheep, either drive them from behind or lead them with a bucket of grain.
 - If sheep are not familiar with where they are going, several people may be needed as herders.
 - To move individual sheep, hold sheep under its jaw and lift their dock.
- Sheep move to other sheep willingly.
- Sheep move away from workers and dogs.
- If given a choice, sheep prefer to move over flat areas before going up an incline or down one.
- Sheep flow better through facilities if the same flow path and flow directions are maintained each time the facility is used.
- Sheep will baulk or stop moving forward when they see sheep moving in the opposite direction.
- Sheep will move faster through a long narrow pen or area than a square pen.
- Sheep move better through the race (chute) if they cannot see the operator.
- Sheep react negatively to loud noises, yelling and barking.
- Young sheep move through facilities easier when their first move through is with well-trained older sheep.



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- Lead sheep are very effective and efficient for moving sheep. One sheep can be trained to lead the others to the barn, on and off trailers or other pastures.

What's the best method to catch sheep?

- To catch a sheep, move up quietly into their blind spot (immediately behind it).
- If you do not have a handling system, gates and panels can be used to make a small pen.
- Pen should be made small enough so that sheep do not have to be chased.
- Manoeuvre sheep into a corner, extending your arms or using portable gates to form a visual barrier.
- Approach sheep slowly and calmly.
- Once in the catch pen, manoeuvre the sheep into a corner.
- **Strategy 1 – Under the chin:**
 - Approach sheep between shoulder and flank
 - Cup your hand under the jaw of the sheep, grab the bony part of the jaw, not the throat
 - Place other hand on the back or rump to make sure the animal does not back away
 - Point the sheep's nose upward to stop forward motion
- **Strategy 2 – By a hind leg:**
 - Catch animal by one hind leg, with your hand just above the hock
 - Move your other hand up to control the head as soon as possible
 - Adult sheep are able to kick strongly, so this method works best for small sheep or young lambs
- **Strategy 3 – By the flank:**
 - To catch adult sheep it is better to grab the rear flank
 - Catch the animal by the front part of the hind leg, as near to the body as possible
 - Place your free hand up on the head as soon as possible
- **Strategy 4 – Using a leg crook:**
 - Crook is just wide enough to allow the leg bone to slip through, but not the foot
 - Sheep can be caught either by a front leg, or hind leg
 - Once a catch has occurred, it's important to quickly work your way up the handle of the crook to secure the sheep
 - Leg crook is one of the most efficient ways of catching an individual ewe on pasture or in large pens
- It is not recommended to catch a sheep by its wool – not only is it painful to the sheep, but it will cause bruising to the carcass.



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Strategy 1



Strategy 2

What makes a good herding dog?

- Well-trained herding dogs save time and effort when gathering, holding and moving sheep.
- Poorly trained dogs do more harm than good and greatly stress the sheep.
- Many breeds can be used – but Border Collie is the most popular.
- Important to judge a dog on its herding performance – a dog’s confirmation has little to do with its ability to work sheep.
- Success with herding dogs starts with purchasing a puppy from a reputable breeder.
- If you have no experience training a sheep-working dog, consider purchasing one that is trained, and get some training yourself.



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How can sheep be restrained?

- There are many ways to restrain a sheep, depending on what you need to do to it.
- A halter is the easiest way to restrain a sheep for treatment or close inspection.
- Restraining devices:
 - Mechanical devices make it easier, faster and safer for handler.
 - While they cause some degree of stress, they should not cause pain.
 - **Gambrel restrainer:** is made out of PVC plastic – placed over sheep’s neck and has slots on either side to hold both front legs. Without the use of its front feet or ability to raise its head, sheep is immobilized.
 - **Sheep chair:** holds a sheep on its rump in shearing position. Chair consists of a metal frame with plastic netting or mesh that is attached to the top and bottom of the chair. The frame is hooked over a gate or leaned against a building. Primary purpose of the chair is to position and restrain a sheep for hoof trimming. That said, the chair provides easy access to the sheep’s ears, mouth, brisket, udder and testicles.
 - **Trimming or blocking stand:** can be used to restrain a sheep so that the handler can work on the sheep without bending over. Neck piece holds the sheep secure.
 - **Turning cradle or tilt table:** squeezes sheep and turns it on its side or upside down. Primary purpose is hoof trimming which is one of the most laborious tasks associated with sheep raising.
 - **Shearing table:** restrains a sheep for shearing and enables a producer to do their own shearing.



There are many ways to restrain a sheep, depending on what you need to do to it.

What technique should be used to tip sheep?

- When you want the sheep to sit on its rump, sheep should be off-centre, so that it is sitting on its hip and not its dock.
- Sheep struggle very little in this position and are easy to work with.

- **Starting position:**
 - Stand the sheep in front of you
 - Hold sheep's head in left hand, placing your hand under the jaw
 - Put your left knee near or just behind sheep's left shoulder
 - Your right leg should be touching the sheep's side near its left hip
 - Put your right hand on the sheep's back right over the hips
- Turn sheep's nose away from you and right around as if it was trying to reach a spot on its back just behind the shoulder – as soon as you bring the sheep's nose around you'll feel its weight on your legs.
- Put enough pressure on its hips with your right hand that the sheep cannot pick its hind feet off the floor. Take a step back with your right leg. The hind end of the sheep will start to go down.
- Continue to bring the sheep's head around until the animal is sitting down with its back leaning against your legs.
- **Tipping larger sheep is more difficult:**
 - Reach underneath its body and grab its farthest leg until it drops to its rump
 - Sometimes this is a two-person job



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How should sheep be transported?*

- All sheep leaving the farm of origin need to be individually identified with an approved Canadian Sheep Identification Program tag.
- Some provinces require livestock manifests.
- Ensure all animals intended for transport are fit to be transported (see 'Additional Resources' at the end of this section).
- Stop and check on the sheep after the first hour of the trip and every 2-3 hours afterwards.
- Sheep must be protected during transit to prevent suffering caused by exposure to severe weather conditions.
- Sufficient ventilation must be available at all times while the sheep are in the vehicle. Aerodynamic airfoils installed on truck tractors to enhance fuel efficiency must not restrict the airflow into the trailer in order for necessary ventilation and cooling.
- Appropriate measures must be taken to prevent engine exhaust from entering the area occupied by the sheep.
- Ventilation should be adjustable from the outside of the vehicle. As the temperature changes during a trip, adjustments can be made without unloading the sheep. The use of adjustable weather panels is an effective way to achieve this.
- Reduce loading density to 85% of maximum for trips in excess of 24 hours to allow room for sheep to lie down.
- **Precautions in cold weather:**
 - Sheep need to be protected from freezing rain and wind blowing into the sides of the truck because it increases their loss of heat and can cause death from hypothermia, even at temperatures above freezing.



Some provinces require livestock manifests.

*Source: Ontario Ministry of Agriculture, Food and Rural Affairs Factsheet: Avoiding Heat and Cold Stress in Transported Sheep. Taken with permission from Canadian Agri-Food Research Council's (CARC) Recommended Codes of Practice for the Care and Handling of Farm Animals – the Sheep and Transportation Codes.

- Young and recently shorn sheep are particularly susceptible to frostbite and loss of body heat during transportation.
- Remove wet bedding after each trip to prevent it from freezing onto the truck.
- **Signs of animal discomfort (cold stress) during transportation:**
 - Eating of available bedding
 - Fluids frozen to the face or nostrils
 - Shivering
- **During winter travel:**
 - Increased bedding or insulation is necessary in cold weather.
 - Increased loading density beyond recommendations can predispose individual animals to frostbite because it prevents them from repositioning in the truck. It can also cause sheep to sweat if they are packed in too tight, leading to cold stress.
 - Cover openings to protect sheep from cold winds caused by movement. Wind chill lowers the effective environmental temperature and can cause frostbite.
 - Protect sheep on the side of the truck that is exposed to a cold crosswind.
 - Replace bottom slats in vehicles to protect from the cold and road splash.
 - Adjust openings to balance the need for protection from wind chill with the need for adequate ventilation.
 - Close nose vents.
 - Take precautions to protect lambs. They must be kept dry and provided with an adequate supply of bedding.
- **Precautions in hot/humid weather:**
 - Take precautions to avoid stress, suffering and possibly death caused by the combination of high temperature and high humidity.
 - Sheep require sufficient floor space to allow for adequate ventilation and a reasonable level of comfort.
 - Severe heat build-up may result from overcrowding. Reduce loading density to 85% of maximum in hot/humid weather.
 - Keep frequency and length of stops where sheep are not off-loaded to a minimum during transit to prevent rapid build-up of heat inside the vehicle.
 - Protect shorn sheep from prolonged exposure to direct sunlight to prevent sunburn.
- **Signs of animal discomfort (heat stress/overcrowding) during transportation:**
 - Overcrowded load will not 'settle'; sheep continue to scramble for footing and the load continues to be noisy for prolonged periods of time. Sheep involuntarily lie down and are unable to get up.
 - Sheep pant when overheated; animals standing with neck extended and with open-mouthed breathing are in a dangerous situation.
- **During summer travel:**
 - Handle sheep carefully because exertion in hot/humid weather is particularly stressful and increases the chances of heat stroke.
 - Allow every animal to rest when over-exerted.
 - Sufficient ventilation must be available at all times while the sheep are in the vehicle.
 - Whenever possible, avoid trips during hot/humid periods.



Young and recently shorn sheep are particularly susceptible to frostbite and loss of body heat.



Severe heat build-up may result from overcrowding. Reduce loading density to 85% of maximum in hot/humid weather.

- When high heat and humidity are forecast, schedule transportation at night and in the early morning.
- Avoid periods of intense traffic congestion.
- Do not park loaded vehicle in direct sunlight.
- When necessary to stop, minimize the duration of the stop to prevent the build-up of heat inside the vehicle.
- Sheep can be cooled by watering the floor of the vehicle or by using a fine mist spray. If you have an overheated sheep, gently run cold water over the back of the head. In areas of high humidity, adding water to the truck will actually increase the humidity causing greater stress on the sheep.



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Craig Richardson, Eastern Ontario Agri-News, 2002

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Craig Richardson, Ontario Ministry of Agriculture, Food and Rural Affairs, 2002

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Anita O'Brien, Ontario Ministry of Agriculture, Food and Rural Affairs, 2002

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Anita O'Brien, Ontario Ministry of Agriculture, Food and Rural Affairs, 2002

<http://www.omafra.gov.on.ca/english/livestock/sheep/facts/02-059.htm>

Sheep 201: A Beginner's Guide to Raising Sheep

Susan Schoenian, Western Maryland Research and Education Center, 2007

<http://www.sheep101.info/201/index.html>

Additional resources

How do I evaluate whether an animal should be transported?

Should this Animal Be Loaded? Guidelines for Transporting Cattle, Sheep and Goats

Ontario Farm Animal Council

http://www.cansheep.ca/user/docs/pdf/National_CSG_DecisionTree_2009.pdf

Guide to Assess Fitness for Transport

Canadian Food Inspection Agency

<http://www.inspection.gc.ca/english/anima/trans/polie.shtml#figure1>

What is Alberta's specific legislation for transporting sheep?

Guide to Humane Care, Handling and Transportation of Sheep

Alberta Sheep & Wool Commission and Alberta Farm Animal Care

<http://www.absheep.com/documents/GuideToTheHumaneCare.pdf>

What is my legal responsibility as a sheep owner?

Recommended Code of Practice for the Care and Handling of Sheep

National Farm Care Council

<http://nfacc.ca/pdf/english/Sheep1995.pdf>

Thank You

We would like to thank Jennifer Woods of Reflected J. Consulting, for her contribution.

<http://www.livestockwelfare.com/bureau/speakers/woods.htm>