



Steps of Small Ruminant Slaughter

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Introduction

This fact sheet is designed to aid the new backyard butcher in successful harvesting of a sheep or goat. Animal slaughter can be a dangerous activity. An informational sheet is a supplement, not a substitute, for hands on training. Training with an experienced butcher is recommended before attempting animal slaughter independently. While developing the skills to slaughter a small ruminant it is advised not to rush, in order to prioritize human safety and animal welfare.

Pre-Slaughter: Securing the animal in a holding pen

Ensure that the animal is secured in a small pen or livestock trailer. A small pen makes it easier to approach and handle the animal, especially if it has a strong flight response. Animals may act panicked when you approach them to be handled. Ensure that pen walls are high enough so they cannot jump out. When moving animals in and out of holding pens, ensure the ground is stable to prevent slips or falls, there are no sharp edges that could harm an animal, and there is a roof in the event of inclement weather. If the animal will be waiting in the pen for any period, provide them with drinking water.

Restraining the animal and rendering unconscious

Using a halter or head rack, restrain the animal's head. Heads do not need to be restrained if the animals are incredibly docile, however, it is still highly recommended. Render the animal unconscious using a captive bolt gun, electric stunner, or firearm. It is important to have a backup stunning method available in the event that the first one malfunctions. Ensure proper placement of the stun by referring to Figure 1. Maintain full contact between the captive bolt gun and the head, and place the gun slightly behind the poll, perpendicular to the skull. When stunning an animal, use correct procedures to render the animal *fully* unconscious. If

the animal is not fully unconscious, stun it a second time. Do not bleed animals until they are fully unconscious. In ritual slaughter (Halal or Kosher), animals are not stunned prior to bleeding. Ritual slaughter practices require more precision and practice. If an individual is attempting ritual slaughter with little experience, it is recommended to work closely under the supervision of an experienced individual. Ritual slaughter performed incorrectly can cause severe harm to the animal.

Tip

If you're harvesting outdoors, spend time observing your animals. Pay attention to how high they can jump. This is especially important when securing flighty goats in holding pens.

Bleeding and Shackling

Once the animal is unconscious on the ground, insert the knife through the neck behind the jaw bone (Figure 2, location 2) to sever the carotid artery or jugular vein. If you choose to hoist the animal in the air after stunning, a well-placed cut at the base of the neck (Figure 2, location 1) can effectively exsanguinate. A proper bleed is indicated by a high-pressure flow of blood, a drip or trickle is insufficient. Soon after bleeding, the animal will begin to kick. If possible, place the shackle on a hind foot prior to the kicking. Use a hoist to lift the animal by the shackled leg. Allow it to bleed fully. To maintain a clean workspace, spray the bleed area down before the blood congeals.



Figure 1. Correct Stunning Placement. (Jan Shearer, Iowa State University)

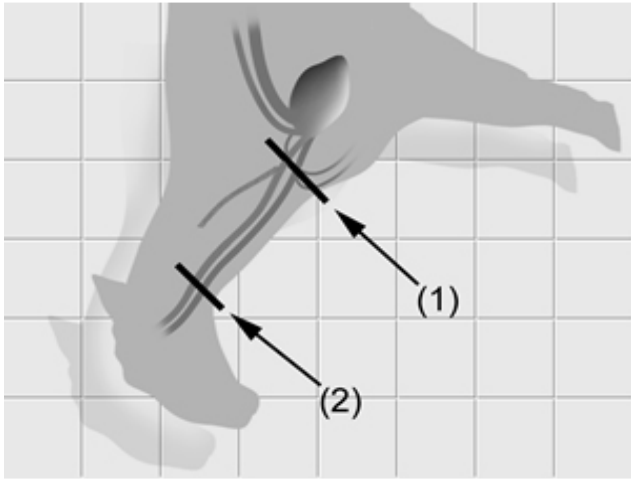


Figure 2. Correct bleeding placement. (Humane Slaughter Association)

Signs of Unconsciousness

Head and neck should be limp and floppy.
 Tongue should hang and be limp.
 Eyes should be open, blank stare. No natural blinking.
 No eye tracking.
 No rhythmic breathing (if animal ribcage moves rhythmically two or more times).
 No response to a nose pinch.
 No vocalization (bellow, squeal, etc).

Signs of Regaining Consciousness

Eye reflex in response to touch.
 Eye tracking or blinking
 Rhythmic breathing (ribcage moving in and out two or more times)
 Righting reflex (raising its head)

Skinning

Hang the animal from a shackle and begin to remove the skin from the hind legs using a knife. Once the Achilles tendon is exposed, you can transfer the legs to a gambrel or trolley. Begin to open up the hide by making lines running between the legs, around the bung, down the midline from the bung to the stick wound, and across the breast. Skin by running a knife between the pelt and the external fat. You can also pull the pelt down, tearing it away from the external fat. An alternative way to remove the hide is fisting, which maintains the external flank muscle on the carcass. Fisting is a process where you use your fist to push the hide off the carcass, separating the felt membrane from the pelt. Remove the pelt of the animal beginning at the top and working downwards. Keep your knife hand clean, while you use your other hand to grip the hide. While small,

these measures can help reduce pathogens that could grow on the meat.

Tip

When making initial cuts to open the pelt, keep your knife blade facing outwards under the skin. This prevents the blade from pushing feces or hair into the meat.

Head Removal

Once the hide is removed down to the neck, locate the atlas and axis joint (first cervical vertebra attached the base of the skull). These joints are interlocking, and connect the head to the neck. Locate the joint by prodding with the tip of your knife, run your knife between the grooves of the joint, and cut the outer muscle that holds the neck to the head. When removing the head, use a body position (squat or crouch, if needed) that allows you to be at eye level with the joint. This may make it easier to locate the atlas-axis joint.

Bunging

Bung the animal by severing all connections surrounding the bung/rectum. This is done by following the shape of the pelvic opening around the rectum with your knife (be careful not to cut into rectum). Once the bung is loosened, push it through the pelvic cavity so it is sitting atop the other digestive organs.

Tip

Reduce contamination by covering the bung in a paper towel or tying with a string. This helps prevent the bung from spreading feces when it is pushed through the pelvis.

Evisceration

Eviscerate or “gut” the carcass by opening the abdomen until your knife reaches the sternum. The first cut is typically made between the rear legs. Insert your palm forward into the opening to press against the digestive organs. Your other hand should push the knife into the abdominal cavity, blade *facing away* from the digestive organs. Cut down until the knife hits the sternum. When gutting, the main goal is to remove the entire digestive system in one piece, from rectum to esophagus, without puncturing any viscera. After the abdomen is opened, use your hands to loosen organs from the back of body wall. Cut the esophagus, allowing the digestive track to fall. Next, break the sternum. If the animal is hanging, the sternum will be broken along soft cartilage, 1-4 inches from the center of the

sternum. You can also break the sternum on a cradle, prior to skinning. When breaking the sternum, run the knife until it reaches the stick wound on the neck, ensuring that all ribs are broken. After the sternum is broken, remove the pluck (lungs, heart, trachea and esophagus) by pulling in a downward motion out of the split sternum.

Trimming and Washing

Visually inspect the carcass for feces, milk or ingesta. Trim those areas away to ensure full removal of any contaminants. Following trimming, thoroughly wash the carcass with room temperature or hot water. To lower microbial load, wash the carcass for 2-3 full minutes at a high pressure starting at the top (hind legs). If you're concerned about pathogen growth, a lactic acid spray is another option to reduce microbial load. If using lactic acid, mix the solution and apply according to the manufacturer's instructions.

Chilling

Lower the temperature of the carcass using either a refrigerator or an ice bath. If the carcass is too large to fit in a fridge, it can be cut into primals (shoulder, foreshank, breast, rack, flank, loin and leg.) Chilling is an important step to reduce the likelihood of microbial growth, and allow for the chemical conversion of muscle to meat, increasing tenderness.

References

Meyer, R., S. Leary, R. Anthony, J. Regenstein, T. Grandin, S. A. Smith, J. Shearer, T. Turner, S. Gwaltney-Brant, and P. Plummer. "AVMA Guidelines for the Humane Slaughter of Animals: 2024 Edition." *American Veterinary Medical Association: Schaumburg, IL, USA* (2024).

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