Piglet Processing

MICHIGAN STATE UNIVERSITY | Extension

General Protocol

- Piglet processing includes various procedures used to administer treatment, prepare piglets for growth, and identify animals.
- A piglet should receive one dose of colostrum within 12 hours of birth.
    - » Processing of small, weak, or ill piglets should be delayed until the piglet is healthy and strong enough to receive these procedures by standing and nursing on its own.
- All litters expressing signs of illness, such as scours, should be processed last, and all equipment used should be cleaned and disinfected prior to use on the next litter(s).
- Inspect all equipment for proper maintenance prior to use.
- Disinfect tools between pigs or litters. Chlorhexidine gluconate is an ideal disinfectant as it is less irritating to the piglets and less corrosive on metal compared to others.
- Throwing or intentionally dropping piglets is a willful act of abuse and will not be tolerated.

Procedures for Piglets

(Please refer to each procedure section if further detail is needed.)

- Administer iron dextran and antibiotic if needed.
- Clip needle teeth if necessary.
- Clip dried umbilical cord if warranted.
- Identify piglet with a tattoo, ear notch, or tag.
- Dock tail.
- Castrate.
- Identify and repair congenital inguinal (scrotal) ruptures if present.

Administering iron dextran and antibiotic

Administer iron dextran and antibiotic (if suggested by farm veterinarian).

The milk from the sow is inherently low in iron; therefore, piglets farrowed and raised in environmentally controlled facilities require supplemental iron to prevent piglet anemia. An intramuscular injection with iron dextran solution is the most efficient and welfare friendly means of supplementation.

- Give injections intramuscularly (IM) in the neck of the piglet.

Administering iron dextran and antibiotic (continued)

- Use appropriate needle size and gauge:
  - » ½-inch length
  - » 18- or 20-gauge
- Check needle for chips, cracks, or burrs prior to giving iron.
- Follow dosage directions from Table 1.
- Give all iron supplementation before pigs are 5 days old to improve iron uptake and reduce anemia.

Table 1. Iron Dextran Administration Guidelines.

Piglet age	Minimum dosage amount	Injection method
0 to 5 days of age	200 mg	IM – neck

Clipping needle teeth

Piglets have eight teeth, commonly referred to as needle teeth. Teeth clipping is not a necessity if the sow is able to nurse all piglets. It is painful for the piglets and has been found to decrease piglet health and nutritional intake due to fracturing of teeth and gum damage. In addition, teeth clipping can result in infection. However, if teeth clipping is performed:

Figure 1. Proper way to clip needle teeth in young pigs.

- Clip needle teeth during the first 24 hours or in event of high feeding competition between piglets.
- Ensure that teeth clippers are sharp and that the blades touch evenly.
- Hold the piglet with the palm of one hand cupping the back of the piglet's head. (See Figure 1.)
- Place a forefinger to open the mouth.
- Clip canine teeth on the top and bottom row. Turning the wrist, expose the other side, and clip bottom and top rows.
- Cut teeth parallel to the gum without injuring the gum or creating sharp points.
- Teeth clippers or teeth grinders should remove the top 1/3 to 1/2 of the teeth.
- Avoid breaking off or cracking teeth as this may cause abscesses. A smooth, even cut is ideal.
- Disinfect clippers after each use by wiping the residue and soaking clippers in a solution of chlorhexidine gluconate.

Trimming umbilical cords

Clipping wet umbilical cords or clipping umbilical cords too short should be avoided since it can result in infection, belly ruptures, or both. Cords should be completely dry before clipping. Avoid pulling on the umbilicus when cutting. Avoid practices such as dipping or spraying umbilical cords in antiseptic solutions since they can ***promote bacterial infections*** due to added moisture.

Trimming umbilical cords (continued)

Using drying techniques such as toweling at birth or sprinkling either adsorbing or absorbing material in the farrowing areas will help to dry the piglets and the cords, and improve comfort.

- Wait until the umbilical cord has dried to clip it.
- Restrain the piglet by holding it in the air by both hind legs.
- Use disinfected side-cutters to cut the dried cord.
- Leave at least a 2" (5 cm) stub of umbilical cord (See Figure 2).
- Do not dip or spray cord with antiseptics.
- Disinfect side-cutters after each use by wiping the residue and soaking clippers in a solution of chlorhexidine gluconate

Figure 2. Trimming umbilical cord.

Protocols for Identifying Piglets

Tattoos

Tattoos are intended as a permanent source of identification and only valuable if the tattoo is legible over time. Tattooing is a painful procedure for the piglet and is taxing on the caretaker's wrists. Making sure the tattooing is done correctly the first time is good welfare for both the pig and the caretaker.

- Examine your tattoo equipment. The pins of the tattoo characters must be sharp, clean, and straight, and secured to the tattoo tool. A rubber band can be used to secure the pins. The tattoo pad, opposite the characters, must be in good condition.
- Hold the piglet with the palm of one hand cupping the back of the piglet's head, and use fingers to stabilize the ears. You can also hold the piglet under the belly.
- Roll tattoo ink liberally on to the thinner, lower part of the pig's ear. Apply the tattoo ink both to the inside and outside of the ear in the area where the tattoo will be placed. Tube ink can also be applied to the tattoo equipment and then used on the piglet's ear.
- Ensure that all characters of the tattoo fit on the ear by placing the pliers carefully over the area of the ear which will get tattooed.
- Squeeze the pliers hard to pass the pins through the ear and into the pad.
- Rub ink into the pinned area.
- Clean the characters with a brush and sterilize with alcohol or chlorhexidine gluconate upon completion of tattooing.
- Gloves may be worn to prevent ink staining on hands.

Ear notches

Notching piglets is a numbering system and a permanent form of identification.

- Notchers should be clean, sharp, and properly maintained.

Ear notches (continued)

- Hold the piglet with the palm of one hand cupping the back of the piglet's head, and use fingers to stabilize the ears. (See Figure 3.) You can also hold the piglet under the belly.
- Complete the notching process by inserting the ear into notchers and pressing the handle of the notchers firmly to create a notch.
- Wipe off organic matter and dip the notchers in a disinfectant solution after each pig. A solution of chlorhexidine gluconate is preferred.

Figure 3. Proper way of ear notching pigs.

Ear tags

Ear tagging is a nonpermanent form of identification and can be used to temporarily identify piglets.

- Taggers should be clean, sharp, and properly maintained.
- Hold the piglet with the palm of one hand cupping the back of the piglet's head, and use fingers to stabilize the ears. You can also hold the piglet under the belly.
- Insert tag pieces into the tagger, making sure tag pieces are properly aligned.
- Apply the tag to the center of the ear, avoiding large blood vessels.
- Complete the tagging process by pressing the handles firmly together to insert the tag pieces together.
- Disinfect taggers after each routine. A solution of chlorhexidine gluconate is preferred.

Tail docking

Tail docking is a task performed on small piglets to prevent the potential for tail-biting problems among pen mates as pigs grow and develop. Cold clipping with sanitized side-cutters is the quickest, most efficient, and less painful method to complete this task.

- Side-cutters should be clean, sharp, and properly maintained.
- Hold the piglet with the palm of one hand cupping the back of the piglet's head, under the belly, or upside down by holding the rear legs.
- Dock the tail approximately 1/2 to 3/4 inch from the base of the tail.
- Wipe and disinfect side-cutters after each pig. A solution of chlorhexidine gluconate is preferred.

Castration

The castration process includes several events: scrotal incision, extraction of the testes, and severing of the spermatic cords. Castration is performed to reduce aggressive behaviors of mature males and to eliminate the presence of "boar taint" from pork.

Castration (continued)

- Examine all equipment, side-cutters, or scalpel handles. Blades should be clean, sharp, and properly maintained.
- Examine the piglet to ensure a scrotal hernia is not present. (See Figure 4.)
- Two handling options: 1) Grasp the piglet by its hind legs, around the ham/thigh area. Hang the head down and gently squeeze the hind legs together, forcing the testicles to pop up. 2) Hold the pig upside down with the thumb pushing up on testicles while the remaining four fingers are holding the piglets over its back.
- Make an incision low on the scrotal area. Either 1) incise horizontally across both testicles, or 2) incise vertically on both testicles.
- Pop the testicles through the incision.
- Testicles can be cut free or torn from the cord. When pulling on the testicles, take care to pull to the side of the piglet; pulling the testicle straight up could result in ruptured intestines.
- Disinfect equipment after each routine. A solution of chlorhexidine gluconate is preferred.

Figure 4. Rupture.

Repairing ruptures

Identify and repair congenital inguinal (scrotal) ruptures if present.

- Ruptures can be caused by improper castration procedures. If this is the case, re-training of the staff will be conducted.
- Prior to castration, inspect the area between the hind limbs for a congenital scrotal rupture. If a rupture is found, follow the taping ruptures protocol.
- Care must be taken when performing this procedure to push intestines back into the abdomen prior to castration. (Tape up incisions to prevent intestines from escaping the scrotum.)
- Two people are necessary for castrating piglets with scrotal hernias. Scrotal hernia repair success is greater at a younger piglet age. (See figures 5 and 6.)

Figure 5. Example of a piglet with a scrotal hernia. Scrotal hernias result when loops of intestine enter the scrotum due to an enlarged inguinal ring.

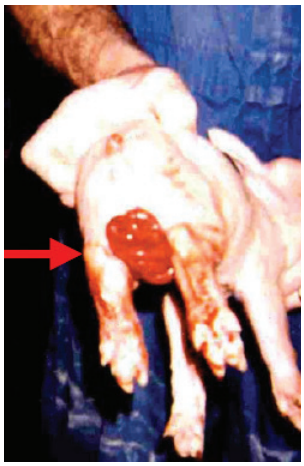


Figure 6. This piglet had a scrotal hernia and was castrated. Intestines protrude from the body through the scrotal incisions made during castration. At this point, euthanasia is recommended.

Taping procedure

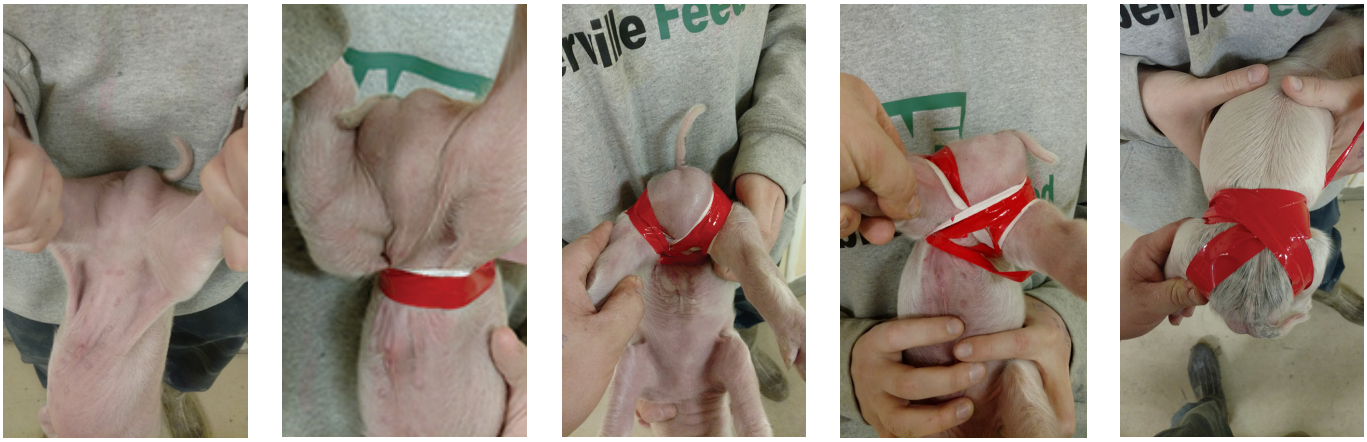
- Hold the piglet as you would for a routine castration. (See figures 7-11.)
- Place adequate pressure on the pelvis by placing your thumb on the pelvic area. This prevents the intestines from escaping while the testicles are being removed.

Taping procedure (continued)

- Dry the area of incision well.
- Continue to apply pressure on the pelvis while the testicles are carefully removed.
- Hold in the rupture by pinching the skin of the incision.
- At the same time, use your thumb to carefully push the intestines back into the abdomen.
- Continue to apply pressure once the intestines are back in the piglet's abdomen.
- At this point begin taping, using electric or elastic-type tape.
- Have one inch of tape overhanging at the top of the left buttock.
- Lower the tape down and to the right, going under the right leg, up the ham and then over the leg, in a figure eight pattern.
- Tape over the top of the right leg, back down the groin area (making an "X" over the groin with the tape that was already on the groin), up and over the left hind leg, up the ham and back down the left leg to the right.
    - » If the rupture is large, this pattern may need to be repeated.
- Once the figure eight is formed, a circle of tape can be made behind the piglet's abdomen and in front of the hind legs, holding the end pieces of tape in place.

The tape needs to be snug enough to keep the intestines from exiting the inguinal canal.

- The tape should allow the incision area to heal, fixing the rupture.
- Ensure that the piglet can still urinate and defecate with the tape on.
- The tape should fall off of the piglet within 3 days of application. If it has not fallen off by then, a caretaker will need to remove it.



Figures 7-11: Taping sequence for scrotal hernia repair.

Safety

It is our goal to provide a work environment that is safe and consistent with our ethical principles. Safety is the responsibility of everyone involved with the farm. Care must be taken to reduce accidents and injuries while working. This includes eliminating or reducing hazards on the farm, providing proper training of procedures, and using personal protective equipment (PPE).

Farm staff should use correct PPE when processing piglets. This includes:

- Exam gloves.
- Protective eyewear.
- Hearing protection.
- Dust mask.
- Closed-toe boots.

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