

## Procedures for Killing and Dressing Home Grown Fowl<sup>1</sup>

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Today, commercial broilers are processed in highly automated, quality-controlled plants located close to where the chickens are grown. These plants dress many thousands of birds daily. The same concept used by commercial processors applies to the processing of small flocks of chickens, turkeys, geese, and ducks. As in commercial poultry processing plants, cleanliness is very important. Equipment should be cleaned before, during, and after processing. Scalding water should be changed often, and all tissues to be saved should be cleaned with cold, running water.

### **EQUIPMENT NEEDED**

The dressing and processing of home flocks does not require much equipment. In fact, most items needed can be found in the home.

**Table:** The preferred table is one that can be moved and with a non-absorbent top that cleans easily.

**Galvanized Trash Can:** Cans should hold from 5 to 20 gallons of water and can be used both for scalding and chilling of carcasses.

**Stove:** The stove is has two potential uses: heating water and singeing feathers--if it has a flame top. Otherwise use a butane gas torch.

**Knives:** Each person involved in the processing should be given a knife. The preferred knife is one with a narrow, thin blade about 6" long. A second type of knife (handy for pulling pin feathers) has no edge and a rounded point. It's a good practice to have a whetstone handy to keep poultry knives sharp.

**Cardboard Boxes:** Cardboard boxes are good containers to hold feathers and inedible viscera. The filled box can be buried in the ground after processing.

**Brush:** A small brush is useful for cleaning the finished carcass.

**Small Container:** The container used to chill edible viscera can be either made of metal (household cooking pan) or plastic.

**Thermometer:** The thermometer is used to monitor the correct temperature of scalding water.

**Sturdy Support for Suspension of Fowl:** The support is used when handling the birds for killing, defeathering and evisceration. A strong, stiff clothesline works quite well. Remember to suspend

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the birds in an area where they will not cause damage during the death struggle.

**Scissors:** Use sturdy scissors for cutting and trimming edible viscera: the neck, heart, gizzard, and liver.

**Ropes:** Ropes are used to hold the bird's feet for killing, defeathering and evisceration. Ropes are prepared by placing a 2"x2" piece of wood at one end as shown in the drawing. The other end of the rope is tied to the support. Wrap the end of the rope (with the piece of wood attached) around the legs of the bird and hook the rope behind (See Figure 1 ). When hung from the support, the legs of the bird should be about shoulder-high.

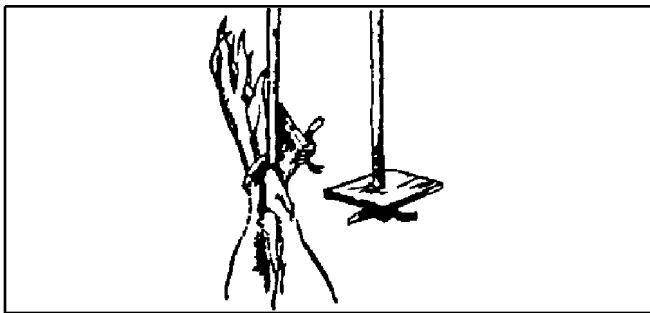


Figure 1.

## SELECTION OF BIRDS TO BE PROCESSED

One or two days before processing, separate the birds you want to process out of the flock and put them in a separate pen and taken off feed 24 to 30 hours before processing. This allows for the emptying of the digestive tract to avoid food and fecal contamination during processing. Birds should be given water during this period to prevent dehydration of the tissues. Dress only healthy birds.

## KILLING

Although there are several methods for killing and bleeding poultry, we only explain the "outside cut". This is the one method used commercially when the animal tissues are to be used for human consumption. To kill and bleed poultry, grasp the head of the rope suspended bird with the left hand. Place the blade of the knife just below the ear lobe, and above and behind the lower mandible or jaw. Remember to slide the blade with the right hand

down through the feathers to the skin area. With the left hand, roll the head slightly to the left, exerting a slight upward pressure. Now, draw your knife across the jugular vein until you see a gush of blood. Try not to cut into the trachea (windpipe) or the esophagus--and do not apply too much pressure on the neck or you will decapitate the animal. If the knife is sharp your incision does not have to be large or need too much pressure.

With a good, clean cut across the jugular vein, bleeding takes about 3 minutes. Just before expiration, the bird will flap its wings vigorously. **MAKE SURE THE BIRD IS DEAD BEFORE YOU BEGIN SCALDING.**

## SCALDING

Scalding the carcass should be done immediately after killing and bleeding. If a carcass is allowed to cool before picking, defeathering becomes more difficult. Here are the most often-used methods of scalding:

**Soft Scald:** Does not cook the outer skin layer. Picking after a soft scald is more difficult, but gives a much more appealing carcass with a longer shelf life.

**Sub Scald:** Cooks the outer skin layer, but permits easier feather picking. Its' major drawback is increased dehydration leading to a shorter shelf life. The skin, following scalding, has a shiny appearance and is sticky to the touch as the carcass dries.

**Hard Scald:** This method is reserved for water fowl. When used on chickens or young fowl, the skin discolors rapidly and feels doughy to the touch.

To scald, hold the carcass by the feet, immerse it completely into the scald water. Swirl it around, up and down. (For water fowl and adult birds, a small amount of detergent can be added to the water for better water penetration and easier picking.) After scalding the carcass, pull out some of the larger wing or tail feathers--they are the most difficult to pluck. If it is too hard to remove these feathers, submerge the carcass a few more seconds. Remember to check your thermometer between immersions. If the water temperature has fallen below the numbers in the chart, reheat it. When the scalding water becomes dirty, replace it. (See Table 1.)

## DEFEATHERING

Immediately following scalding, begin plucking or defeathering. Here are three methods of defeathering carcasses:

**Wet Picking:** Here's a useful plucking sequence: wing feathers, tail feathers, legs, breast, neck, and back.

Feathers should be pulled out against the way they normally lay. Wing and tail feathers must be pulled straight out. A gentle, rubbing action with the thumbs along the skin helps get the fluff and pin feathers. A short, rounded, blunt edge knife also is very helpful with pin feathers. Pin feathers also can be removed by applying pressure below the follicle and squeezing them out. After picking the carcass some hair-like feathers may still be present. Singe those using a flame-type range or a bottle gas torch. Singe the carcass by rotating the carcass around an open flame. **BE CAREFUL NOT TO BURN THE CARCASS, YOURSELF, OR START A FIRE.**

**Dry Picking:** Use this method when you wish to save the feathers. The method is the same as wet picking, except you leave out scalding. Immediately after the jugular vein has been cut, a procedure called **debraining** can be used to help loosen the feathers. To do this, push a narrow, long-bladed knife parallel with the upper mandible, through the lower brain, and into the hind brain. Twisting the knife will sever the brain stalk (See Figure 2).

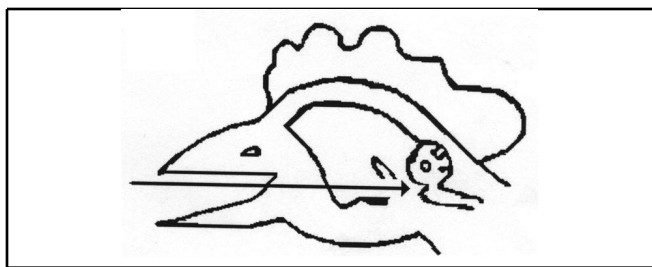


Figure 2.

**Wax Picking:** Is used primarily for water fowl. After the carcass has been either wet- or dry-picked (and most of the feathers have been removed) dip the carcass into hot (130-160°F) paraffin for 10-15 seconds. Have a pan of cold water handy and dip the carcass into it to harden the paraffin. Finally, peel the

hardened paraffin off the carcass to remove the remaining feathers--including the pin feathers.

## EVISCEATION

Once the bird has been killed, scalded, and defeathered, the carcass is called "New York Dressed." At this point you are ready to remove the head, shanks, and viscera to get to the "ready-to-cook" stage.

1. Removal of oil (or Uropygial) gland: Locate the oil gland is at the base of the tail; cut around it, remove and put it in a disposable box.
2. Removal of shank and feet: Bend the leg at the joint, between the shank and drumstick, opposite the normal bend. Cut the shank and feet off at the point by cutting through the joint.
3. Removal of head: Cut the skin and muscle tissue around the base of the skull and twist off the head.
4. Removal of neck: Cut the skin away from the neck using one of two methods:
  1. With the carcass laying on its back, push the knife from the decapitated end of the neck to the top of the breast. Push the handle of the knife downward until the point of the knife penetrates the skin. Cut towards the decapitated end of the neck.
  2. From the base of the carcass, pull the skin taut from the underside with your left hand. Slice the skin of the neck from the base of the decapitated end of the neck. Now, pull the skin away from the neck. Cut the muscle tissue around the neck where the neck joins the back. With your right hand, crimp the neck and twist off. Put the neck in a

container filled with ice water and set aside for edible viscera.

5. Trachea, Esophagus and Crop: These three tissues are connected to the inside of the neck skin. If you took the bird off feed as we advised, the crop may be a little hard to find. It is a pouch associated with the esophagus. When you locate these structures, separate them from the skin and cut them away.

6. Opening the body cavity: There are various methods for opening the body cavity from the posterior end of the carcass.

1. Cut around the cloaca (anal or vent). Be careful not to cut into the intestines.
2. If you're trussing the carcass without string, cut around the cloaca as described, and then, make a horizontal cut across the body between the breastbone and the cloaca. After you have eviscerated and cleaned the carcass, you can push the drumstick under this flap.
3. If you're trussing with string, make a vertical cut from the breastbone down and around the cloaca.

7. Removal of viscera: To remove the viscera, push your hand through the cloaca opening into the body cavity, loosening the upper end of the digestive tract including the bronchial tubes. Grab the gizzard and slowly pull the entrails out through the cloaca opening. The heart, lungs, kidneys, reproductive organs, and other connective tissues still remain in the body cavity. The heart, reproductive organs and connective tissue can be pulled out. The lungs are two pinkish organs embedded on the ribs on each

side. They can be peeled away with your finger. The kidneys are three-lobed structures on each side, embedded in the backbone, more towards the cloaca end than were the lungs. These structures can be scraped away with a finger or stiff-bristled brush. You can finish the evisceration by washing out the carcass with clean, cold water and pulling out any other tissues. You can pre-chill the carcass by placing it in a container filled with tap water. (Let the water overflow or change the water frequently.) This procedure brings the carcass temperature down to that of tap water and helps clean the carcass.

8. Edible viscera: Normally, four tissues are considered edible viscera: neck, heart, liver and gizzard. As each tissue is processed place it in a container with ice water.

1. Neck: The removal of the neck from the carcass was discussed earlier. Cut off any unattractive tissues.
2. Heart: To clean the heart, cut off the vascular tissue associated with it and slip it out of the pericardial sac that surrounds the heart. If you gently squeeze on this tissue, any remaining blood will come out. Then, wash the heart in cold water.
3. Liver: Lift the liver, being careful not to rupture the gall bladder attached. Carefully cut or pinch off the gall bladder at the neck of the bile duct, and trim off any other tissues.
4. Gizzard: Trim off the digestive tract, split the gizzard with a sharp knife, wash away any feed, with your finger, peel off the yellow tough lining. Peeling off the inner

lining is easy if you allow it to chill in ice water before trimming and washing.

## CHILLING

After processing is over, place all the carcasses in a container of ice and water. This container can be the same one you used for scalding and pre-chilling. If you do use these containers, clean them with hot, soapy water, and rinsed well before use. Before you package or consume your fowl, the carcass should be brought down to a temperature of 40°F. The time required to do this is dependent on the number and types of birds processed. Broilers can chill in only a few hours, turkeys may require up to 24 hours.

For more information on procedures for cutting up chickens, ask your County Extension Office for University of Florida Publication EHE 198 "Stretch Food Dollars by Cutting up Your Own Chickens" or Publication HFS 830 "The Cost of Poultry - Whole and Precut Selected Parts Products." For information on freezing poultry, refer to USDA Home and Garden Bulletin "Home Freezing of Poultry", Number 70.

## REFERENCES

Bigbee, Daniel E., *Home Processing of Chickens*, University of Nebraska, Extension Publication HEG81-144.

Maurer, Arthur J., *Home Slaughter of Poultry*, University of Wisconsin, Extension Publication A1478.

**Table 1.**

<b>Table 1.</b> Characteristics of soft scald, sub scald, and hard scald			
Method	Temperature	Immersion Time	Carcass type
Soft Scald	120-130°F	30-75 seconds	Broilers, roasters and young turkeys
Sub Scald	138-140°F	30-75 seconds	Mature chickens and turkeys
Hard Scald	160-180°F	30-60 seconds	Ducks and geese