

# On-Farm Poultry Processing

Karma Glos, Kingbird Farm

For the past six years chicken processing at Kingbird Farm has been a very successful event with the dedicated support of friends and family. All of my comments about our on-farm processing must be previewed by the fact that nearly every slaughter was assisted by friends and family that come for the lunch and apparently the fun of it. It defies logic to have such an excellent crew of volunteers every year that are willing (and very skilled) to assist in the process of changing a feathered bird into a clean broiler fit for the most particular customer. Our operation (and those of many other small producers) would not be nearly as efficient, profitable, or enjoyable without the continued support of our dedicated volunteer chicken crew.

That being said, the processing of broilers and other birds is often the biggest hurdle small producers face when contemplating pastured poultry. The brooding seems manageable; the pasturing seems within reason; even the marketing might be a snap, but doing the actual killing of potentially hundreds of birds can be daunting. Of all the steps, however, the processing is the one we want complete control of. I cannot conceive of packing up my free-range birds into a truck and shipping them off to be handled, killed, and cleaned by someone else. I want to control every step of the processing so that the birds are handled gently, killed respectfully, and cleaned with the utmost cleanliness and care. This is the only way I can be sure that I stand behind my product 100%.

Our processing techniques and skills have been greatly refined over the years. We began only tackling 50 birds in a day with the most rudimentary equipment. Most of our knowledge came from a few home-processed roosters for our own consumption. We quickly realized we needed an efficient, smooth-running operation with skilled help to make the task manageable. We designed better equipment, refined our skills, and increased our production without sacrificing quality control. We still limit ourselves to 100 birds a day: catching birds in the dark, having breakfast at 7 am and expecting to be finished with everything by lunch time.

## The Law

Under New York State Department of Agriculture and Markets Division of Food Safety and Inspection Circular 925, Article 5-A, Section 96-c the licensing of slaughterhouses “shall not apply to any person who slaughters not more than two hundred fifty turkeys or an equivalent number of birds of all other species raised by him on his own farm during the calendar year for with an exemption is sought (four birds of other species shall be deemed the equivalent of one turkey), provided that such person does not engage in buying or selling poultry products other than those produced from poultry raised on his own farm.” This exemption allows us to raise and process for retail sale 800 broiler chickens and 50 turkeys each year. It does not, however, allow us to do improper or unclean processing just because it is on-farm. All small poultry producers owe it to themselves, other producers, and especially their customers to process in a clean, safe, respectful manner. This does not require a lot of fancy equipment, expensive structures, or sanitizing chemicals. It does require common sense, simple cleanliness, and honesty.

## The Processing Facility

We began, and have continued, with a very simple processing facility. We have seen many other small facilities over the years, each one working within the individual farm. We have seen garages, sheds, old milk houses, trailers, and even a refitted school bus. We began with an open-sided 8 x 18 shed with a gravel floor and have stayed there. The fresh air and sunshine make it a pleasure to work in (most seasons) and add the natural cleaning agent of weather. During foul weather



Chickens are moved to processing station in wooden crates before dawn



Special tools and knives are used for each stage of the processing.



Killing cones, scalders and plucker are arranged for efficient work flow.



Eight foot stainless steel table where chickens are eviscerated, cleaned and bagged.

(particularly turkey processing) we can enclose the shed in tarps and even install a heater and lights. The open, simple set up allows for easy clean-up, minimal expense, and no place for pests to take up residence.

## The Equipment

Inexpensive, smooth-running, dependable processing equipment is essential. Our initial equipment was purchased second hand out of old barns, but we quickly tired of its low capacity and tendency to break down. We still keep the original scalding and plucker around as backup just in case, but have moved on to custom-built models.

On the kill side of the shed (divided by sheet metal walls and a curtain) my husband Michael has the most “complicated” equipment. He has a line of four metal “kill cones” on a sheet metal wall with blood buckets placed below. On the other side of his section he has a propane scalding with a rope and pulley for dunking and a barrel plucker. The scalding is simply a 50-gallon steel drum (food grade) with the top 1/3 cut off. It sits on a propane burner (turkey fryer) with a 5-gallon propane tank. He monitors the scald temperature (145 degrees F) with a digital thermometer and adjusts the heat manually. The plucker was also handmade using a plastic drum and a rotating plate with fingers built within a wooden frame and powered by a small electric motor (see article for details). This set-up easily handles four birds at a time, approximately 30 per hour. This is a comfortable rate for both Michael and the folks on the other side of the curtain.

On the clean side of the shed there are typically three of us in charge of eviscerating, cleaning and bagging on an eight-foot stainless steel table. I have done nearly all the eviscerating over the years since my small hands work well in the bird, and once someone is fast at eviscerating you don't want to replace him or her. I have simple equipment involving only three feet of table top with a hole for offal that drops into a bucket. On my counter I have a tub of ice water for giblets, a carbon steel knife, a lung remover, and an overhead hose with a spray nozzle. The cleaning crew at the other end of the table has only pinning knives and spray nozzles. When

they are done cleaning, inspecting, and rinsing a bird it is then transferred to the 100 gallon galvanized chill tank filled with ice water and covered by a clean tarp. During bagging we use a draining system which is a series of rigid plastic pipes that are inserted vertically into a wooden stand. Birds can then be placed on the pipes to be drained of water and covered by a bag. We use freezer poultry bags, twist ties, and preprinted freezer labels that are filled out using a digital scale. On the clean side we also use plastic aprons, hats, and much hand washing. After handling, the birds are transferred in coolers to the freezers in our store at the barn.

## The Process

The processing begins the night before the actual day. Food is removed from the birds, leaving them with plenty of water and grass. We load the wooden poultry crates into the truck and drive it up to the pasture for morning loading. Down in the processing shed we scrub down the chill tank with bleach and fill it half full with water (in order to save water the following day). We also pre-write the labels with price, date, and product to save time during bagging and weighing.

The next morning before light Michael and an assistant load the birds into crates and drive them down to the processing shed. He heats up his scalding water and hooks up all the hoses (hot and cold water comes from the house). The morning crew then has breakfast and prepares for a busy day. We try to start the processing by 8 am, both so the birds don't have to wait around, and so we are always finished by the time customers arrive. While Michael is killing the first four birds I scrub down the countertops, clean and sharpen knives, and prepare the ice water. I will usually see my first birds for eviscerating within 5 minutes.

On the kill side Michael keeps the crated birds out of the rain or hot sun. He selects birds from separate crates there by progressively giving all the birds more room as he goes. Each bird is placed head-down in the kill cone. This usually calms them right down so Michael can quickly and cleanly cut their jugular. Bleed out usually takes about four minutes. Meanwhile he can be scalding the previous batch.

After the bleed out all four birds are secured by the feet to a pulley, which Michael uses to dunk them in the scalding (90 seconds at 140 degrees) slowly several times. He uses dish soap in the water to break surface tension and penetrate the feathers. After scalding he turns on the plucker and places all four birds in at once for plucking. Plucking only takes approximately 20 seconds after which he pulls any remaining large feathers and removes the head and feet. At this point the birds are transferred to the clean side of the shed.

On the clean side I begin the eviscerating process by removing the oil gland with a sharp knife. I then cut the neck skin and loosen the crop. I carefully open up the abdomen, remove the intestines, pulling out the crop, and cut around the vent. All of this offal is dropped directly through a hole into the “gut bucket.” I then remove the heart and liver and carefully pinch off the gall bladder. The heart and liver are kept in ice water until bagging. I use a lung remover to pull the lungs and a knife to remove the neck (which is also kept). After a good internal and external spray down I pass the bird to the cleaning crew. They meticulously examine the bird removing any pinfeathers, external fat, or blemishes. The birds are again rinsed inside and out before being placed in the chill tank. Our chill tank easily holds 50 gallons of cold water, 400 lbs. of cube ice (4 lbs per bird), and 100 chickens. After chilling for at least an hour, birds are drained and bagged. They are ferried up to the store in coolers where they are weighed, labeled, and frozen or placed in the commercial cooler fresh for customer pick-up. During the entire process we strive to keep the chickens as cold (35°-40° F) and clean as possible.

During clean-up Michael's side is scrubbed and bleached. The buckets of feathers, heads, feet, blood, and offal are hauled up to the composting bins where they are layered with horse manure and straw (makes a divine compost after 2 years). He covers his equipment and cleans up all the buckets. I scrub down and bleach all of the equipment on my side and drain the chill tank. The knives are cleaned and dried and the aprons are washed in the washing machine. I then place everything on the counters to dry, air out, and get a little sunshine. Then we eat lunch.

---

## Training

Starting out processing alone can be an overwhelming prospect. I highly recommend getting as much experience as possible before striking out on your own. Learn at the feet of the masters. In my case I was quite lucky to learn the finer points from Joel Salatin at his farm processing 200 birds with his family. Books, articles, and chat rooms cannot replace getting your hands dirty next to an experienced farmer. Many times they may only let you observe, but that too will be very educational. Anything you do to increase your skills and respect for the process will benefit everyone in the end.

---

Comments or questions can be sent to Karma at <karma@kingbirdfarm.com> or Kingbird Farm, 9398 West Creek Road, Berkshire, NY 13736

---

Reprinted from *Organic Farms, Folks and Foods*, the quarterly newsletter of the Northeast Organic Farming Association of New York, Inc., (©2003 by NOFA-NY), an organization dedicated to the creation of a sustainable regional food system which is ecologically sound and economically viable.

For permission to reproduce more copies contact NOFA-NY at: 518-534-5495.

Please include this message in any reprints.