On-Farm Poultry Processing in North Carolina

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On-Farm Processing Steps

- Pre-slaughter preparations
- Slaughter
- Scalding
- Picking
- Evisceration
- Chilling
- Cut-up/Deboning (optional)
- Packaging/Labeling
Pre-slaughter

• Feed withdrawal
  – Birds should be removed from feed 8-12 h prior to processing to reduce ingesta/fecal contamination during processing; never more than 24 h
  – Birds on natural daylength should not get fed the morning of the same day of processing

• Water withdrawal
  – Birds should be left with water as long as possible
Pre-slaughter

• Catching/cooping
  – Coops, boxes, etc. must be breathable for number of birds inside to prevent suffocation
  – Containers must be clean to prevent any pathogen contamination from previous flocks

• Transport
  – Should be minimal, and never more than 24 h
  – Protect from excessive heat or cold – birds easily killed by hypothermia at truck speeds in winter
Slaughter

• Stunning
  – Not required for poultry in the US, but recommended; low voltage DC works best

• Killing
  – By law, all animals slaughtered for food must be killed by bleeding
  – Best cut gets both jugulars and carotids without cutting esophagus and trachea

• Bleeding
  – Requires approx. 2 min; no eye response if touched designates death
Cones provide physical restraint during stunning, killing, and bleeding
Scalding

130-140 F for 60-90 seconds, adjust as needed

Too long/too hot = overscald on breast
Picking

99+% feather removal
Film

https://youtu.be/oxhVn1ecOrE
Evisceration/Carcass Prep

Hock Cutting
Head Removal
Neck Removal (optional)
Opening/Venting
Viscera Removal
Lung Removal
Crop Removal
Giblet Harvesting (optional)
Film

https://youtu.be/7am2mj2nNGQ
Chilling

Ice/water or air chilling

≤ 40 F within 4 h (small birds) or 8 h (large birds)
Wash and inspect prior to packaging
(customers buy on visual appeal)
Cut up and deboning
Cut-up and deboning

- Bird cones offer better ability to cut or debone parts than flat tables or cutting boards
- Cut-up parts or deboned meat (breasts, thighs) offer more value to customer but add time and cost to processor
- Many retail forms available (wings, drums, boneless skinless breast, etc.) – label correctly
- Whole carcasses should be aged ~4 hours to let allow breast meat to get tender before deboning
Aging time and meat tenderness

Aging hours

Shear Value

tough

moderate

tender
Film

https://youtu.be/qVZc1bprkIc
Packaging/Labeling

• Many product forms can be produced
  – Whole bird shrinkwrapped, bagged giblets, parts, boneless skinless breast fillets, etc.

• Packaging and label types depends on customer needs and available equipment

• NCDA requires specific label information (next slides)
Regulations

• Poultry - NCDA Meat and Poultry Division
  Local Meat and Poultry Division personnel should be invited to your first on-farm processing
• Local/County Regulations
• Farmer’s market rules – each market differs
• Meat Handler’s License (good idea for on-farm processors)
NCDA Poultry Regulations

Exemptions for carcass by carcass inspection, either 1,000 or 20,000 per year

1. Grow/process birds from your farm   (1K, 20K)
2. Sell/distribute only own birds            (1K, 20K)
3. Process under sanitary conditions      (1K, 20K)
4. Keep adequate records                  (1K, 20K)
5. No interstate commerce                  (1K, 20K)
NCDA Poultry Regulations

6. Proper labeling (1K, 20K)
7. Process only healthy birds (20K)
8. Other birds not processed in facility (20K)
   (unless mobile processing unit)
9. Other potential exemptions (20K)
   (see regulation handout)
10. Exemptions only for raw, not cooked
NCDA Poultry Regulations - Label

Must include:

1. Processors/owners name
2. Processors/owners address
3. This statement “Exempt P. L. 90-492”
4. Safe Handling Instructions (see Handout)
Mobile processing units (MPU’s) may be rented
List of MPU’s in NC

Darby Farms, Union Mill, NC
  Contact: Daniel Dover
  Phone: (678) 617-3468

Windy Bottoms Farm, Orange County
  Contact: John Frank      Email: jfrank12@yahoo.com
  Phone: 919-304-1151

NC State Extension, Harnett County Center
  Contact: Brian Parrish    Email: brian_parrish@ncsu.edu
  Phone: 910-893-7530 and 919-692-5845 (cell)

Appalachian State University
  Contact: Todd Rudicill    Email: rudicilljt@appstate.edu
  Phone: 336-877-3455

Tar River Poultry Initiative, LLC Franklin County
  Contact: Julie Gupton     Email: TarRiverPoultry@gmail.com
  Phone: 919-414-3759 (call or text)
Build your own
Thanks for your attention

Questions?

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