



Expansion of Small-Scale, Pasture-Based Poultry Businesses: Improving Feasibility and Access to Processing

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This project has been at the center of a trio of SARE poultry projects led by Heifer International, with partners National Center for Appropriate Technology, University of Arkansas, and Kerr Center for Sustainable Agriculture.

- Integration of Pastured Poultry Production Into the Farming Systems of Limited Resource Farmers LS96-076
 - Enhancing Feasibility for Range Poultry Expansion LS99-105
 - Small-Scale Poultry Production: Sustainability Training ES05-080
- For more details on these projects, see Projects Database on www.sare.org

Introduction

Small specialty poultry producers raise free-range or organic poultry that boosts income on limited-resource farms and contributes to agricultural sustainability. Many would like to expand their operations but lack infrastructure and feasibility/business planning tools. There is a need, in particular, for access to livestock processing. In response, Heifer International implemented a SARE-funded project that included a mobile poultry processing unit (MPU). The MPU, now owned by Kentucky State University, has allowed Kentucky producers to legally process poultry, and has been a gold standard across the country for MPU operation under government compliance. Partner organization, the National Center for Appropriate Technology (NCAT), assisted in developing farmer-friendly materials on small-scale poultry processing, entrepreneurship, nutrition, etc. Since the conclusion of the project, impacts continue on a national level and are summarized.

Kentucky MPU: Pioneer with Long-lasting Impact

History

- MPU built in 2000
- Began because small KY poultry producers had no way to process birds
- Started with this SARE grant
- Initially owned by Heifer International
- Insurance was problem because Heifer Int. had to ask farmer users to have a million dollars of insurance
- KSU took ownership of the unit in 2005
- Initial plan: to be used at many sites such as fairs/grocers
- However, site and docking station requirements presented barriers
- MPU is not allowed to be hooked to municipal system for waste water
- Septic system is required; but it is difficult to find septic contractors to pump out waste water
- MPU had an awning that opened to the side with a screened area under it for kill area (See Figure 1)
- Screening not very stable in wind and insects could enter; an enclosed building is better at excluding insects/pests
- Hard to set up and take down
- MPU requires a high level of knowledge to use; coordinator needed to travel with it



Original set-up

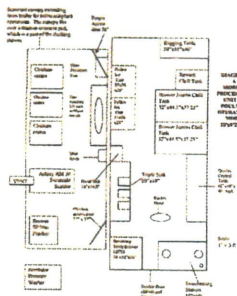


Figure 1: Diagram of original KY MPU set-up



Building housing MPU



MPU parked inside



Kill cones and blood trough



Scalding



Pickling



Window where clean carcasses enter

Results

State-approved Mobile Processing Unit (MPU)

- Owned by Kentucky State University (KSU); rented to producers
- Approved for small livestock, poultry, aquaculture
- Contact MPU Coordinator Steve Skelton at KSU; (502) 597-7501; sskelton@gmail.com

Features

- Enclosed gooseneck cargo trailer (20' x 8') with processing equipment pulled into a building shell
- Docking station: building has electrical hook-ups, hot and cold water, septic system for waste water

Equipment and Supplies

- Outside trailer: Stun knife, cones, scalding, picker
- Inside trailer: Overhead shackles to convey birds during evisceration and cleaning, stainless steel tables, buckets for oil, water hoses and spray nozzles, chill tank, ice maker (not portable), knives, scale with label printer, vacuum packer, bags, thermometers, and other supplies

Operations

- Birds are slaughtered outside, passed through window into trailer where eviscerated, cleaned, chilled
- Sanitation procedures require boots, aprons, gloves, hair nets, no jewelry
- High bird health status: only birds that originate from NPIP-approved hatcheries can be processed
- MPU Coordinator is trained to condemn unhealthy live birds and to look for internal signs of disease
- Capacity: 400 birds/day with 3-4 workers
- Users clean up after each use: wash, rinse, sanitize
- MPU Coordinator provides oversight, and assistance, if needed

Use

- MPU is rented regularly from April to December when pastured poultry raised and also used by KSU
- Additional docking station built at Morehead State University in Eastern KY
- Kentucky MPU has been a model for the whole country; while many MPUs are open trailers, this is the "Cadillac" of poultry MPUs
- New USDA plant (fixed) in Bowling Green, KY (www.aboutssenterprises.com)

Cost to Use MPU

- Cost is \$75.00 for first 50 chickens and \$0.75 for every additional chicken
- Turkeys are \$75.00 for first 5 and \$3.50 for every additional turkey
- Fees include gas, water, electricity, aprons, booties, cleaning

To move MPU

- Load equipment in trailer
- Use at least a 1/2 ton pickup with gooseneck ball and electrical connections for trailer and brake lights

Docking Station Requirements

- Level pad to park the unit; additional concrete pad sloped to drain for slaughter area
- Electrical requirements: 200 amp service panel that is either waterproof/covered
- Water must be from an approved municipal source or a tested well; flow rate must be at least 10 gallons per minute
- Waste water treatment: 750-gallon grease trap and a 1500-gallon septic tank
- Wastewater holding tank must have a float sensor with an alarm or light as a fill indicator; water must be pumped out and hauled to an approved wastewater treatment plant
- MPU user must bring a 100-lb. propane tank to provide heat for the scalding (propane tanks cannot travel with MPU due to risk)
- Ability to maintain high level of sanitation and exclude insects/pests

Collaborations

- Excellent example of collaborative efforts
- SARE funds were seed money in this case
- Partners for Family Farms gave \$50,000
- KSU, Univ. of KY, KY Dept. of Ag, KY Cabinet of Health worked together

Regulatory and Liability

- Details were not clear initially; evolution took time
- MPU operates under exemption to federal inspection for up to 20,000 birds per year per user
- KY Cabinet of Health Services is informed every time unit is used and they are present at many processing sessions, often training new staff
- USDA inspects once per year and reviews HACCP paperwork
- KSU has a waiver of liability
- Each label has user name, address, telephone, user facility manager number, and marked "Exempt Poultry P.L. 90-482"
- Farmers are advised to have a product liability policy in addition to their farm policy
- The meat can be sold anywhere in KY

Food Safety

The MPU operates under the following plans:

- Standard Operating Procedures
- Sanitation Standard Operating Procedures
- Hazard Analysis Critical Control Points
- Good Manufacturing Practices
- Recall Plan

Training

- Users must take a one-day Facility Manager training once every 2 years
- Trained in HACCP, pathogen reduction, sanitation, standard operating procedures



Triple sink and hand wash sink



High level of sanitation



Scales and labeling



Spray nozzle and buckets for viscera



Chill tank

Additional Objectives¹

In addition to the goal of developing an MPU to improve access to legal processing, this project developed farmer-friendly publications:

- Small Poultry Processing Plants and Services (now a self-listing database)
- Legal Issues Impacting Small Poultry Processing² (national resource)
- Pastured Poultry Nutrition (being translated to Spanish)
- Genetics for Pastured Poultry Production² (accessed 17,000 times on Web in last 5 years)
- Small-Scale Poultry Processing (being translated to Spanish) (accessed 50,000 times on Web in last 5 years)
- Growing Your Range Poultry Business: An Entrepreneur's Toolbox (accessed 21,305 times on Web in last 5 years)

¹Materials from project are available at www.attra.ncat.org and www.sustainablepoultry.ncat.org

²Materials have been updated since project ended in 2002

Further outcomes from the project included: a survey of needs of pastured poultry producers in 2000; a benchmark meeting of small poultry processors at Univ. of AR in April 2002 to network and develop budgets; a new law passed in MS that state laws may not be more stringent than federal law regarding exemptions for poultry processing; and additional work in MS and AL continued to explore small scale poultry processing.

Conclusion

This project has improved the feasibility of small specialty poultry businesses. An innovative MPU was established with the assistance of other organizations, which not only provided much needed access to poultry processing for small producers in KY, but also has been a pioneer in small-scale and MPU poultry processing and has provided information to individuals and groups across the country. Technical publications were developed on small-scale processing, business development, alternative genetics, and nutrition in alternative poultry production, as well as resource lists on poultry meat regulations in each state and lists of small plants offering processing services. In addition to the specific objectives outlined in a project, SARE grants can provide seed money and a launching pad for long-lasting impacts and partnerships past the life of the grant, demonstrating how organizations with common goals can work together.