



Voice of the Farmer: A Survey of Indiana Meat Farmers and Their Processing Needs

Summary

Eighty meat farmers in Indiana responded to an online survey about their experiences with slaughter, processing, and butchering services for their livestock and poultry. For nearly half of respondents (45%), meat sales provide the majority of their farm income. These farms are distinctive for finishing and selling meat themselves, directly to consumers (63% of respondents) and/or to wholesale buyers (24%), and most respondents have diversified enterprises on their farms, raising more than one type of animal (51%). Nearly every respondent (88%) lists slaughter and processing as a barrier to further expanding their farm business, and most respondents list it as a moderate or extreme barrier (68%).

Background

Farms that raise, finish, and sell meat to local buyers are rebuilding the capacity of local and regional food systems to circulate a supply of livestock, poultry, meat, dairy, and eggs within a region. As an inevitable step in bringing meat and poultry to market, slaughter and processing facilities make up a critical part of a region's market capacity. With processing having followed a trajectory of industry consolidation similar to that of other agricultural sectors, local meat farms today have fewer options for slaughter and processing than years past. In 1969, the United States had 10,000+ meat processing facilities, only 3,000 of which existed

in 2012 (Denny, Worosz & Wilson, 2016). Options for processing are further narrowed by government regulations that have stratified facilities into three levels – custom exempt, Indiana State Inspection, and USDA Federal Inspections - and farms must use a level of facility that offers the inspection that fits their market channel, which could be direct to consumer, or to a wholesale buyer (Appendix 1). Federal and state inspection labelling and food safety requirements are then inspected by the county health department where the meat is sold.

Farmers and processors depend on one another for business success. There are few formal conversations, however, between farmers, meat processors, and the agencies that oversee their work, despite the critical role they would play in developing capacity (Gwin & Thiboumerly, 2014). There are some states though, such as North Carolina, New York, and Vermont, that have facilitated conversations to examine and respond to the challenges farms and processors mutually face, and it is clear that both parties face inter-related issues of seasonality, fluctuations in volume and throughput, sustaining a workforce, storage, equipment, upgrades, waste, and interpretations of federal and state rules by the county health inspectors. Here, we present a study of how a sample of Indiana's direct marketing meat farmers view their current options for processing, and recommendations they make for improving those options.

Approach

In 2019, Nightfall Farm and Plumer & Bowers Farmstead collaborated with Indiana University Sustainable Food Systems Science researchers on a statewide survey of Indiana meat farmers to learn more about how their processing experiences influence their farm business.

Method

In February and March 2019, the research team distributed an online survey to service providers for meat farmers throughout the state with a request that they distribute the survey to their farmer networks. Eight service providers confirmed having sent it out, including the Southern Indiana Grazing Conference, Purdue Extension, Feldun Purdue Agricultural Center, Southern Indiana Purdue Agricultural Center, Northwest Indiana Food Council Food Expo and Discussion (F.E.D), Indiana Farmers Union, Northeast Indiana Local Food Network, and the National Niche Meat Processors Association. A convenience sample of 80 meat farmers from 30 Indiana counties responded to the survey (Figure 1).

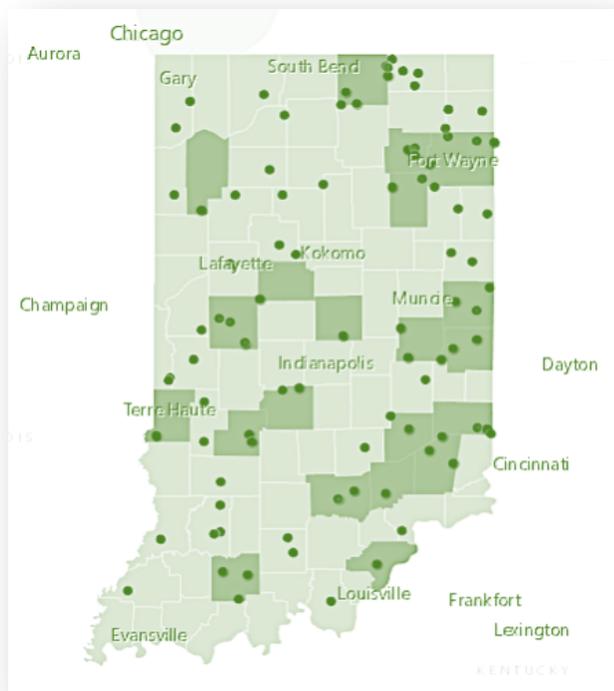


Figure 1. Indiana meat processing facilities (dots) and location of farmer respondents (counties).

Who Answered the Survey

Respondents' average annual gross sales of meat from 2018 was \$68,000 (range = \$1,000 to \$650,000). Most respondents (63%) sold direct to consumer (for home preparation), 19% sold to wholesale buyers such as restaurants and food service, and 5% sold to distributors. The majority of these farmers (68%) make quality claims about their meat to their consumers regarding production practices, including: No-antibiotics (21%); Pastured (20%); Grass-fed (14%); Grain-finished (10%) and Grass-finished (9%).

These farms raised and butchered collectively more than 180,000 animals in 2018, using all regulatory and market channels including on-farm processing, BOAH limited permit, custom exempt, state inspected, and federally inspected for meat, poultry, and rabbit (See Appendix 1 for details regarding processing regulations for various market channels). The majority of respondents raised beef cattle for sale (61%) followed by swine (36%), meat chickens (30%), and lamb (18%). 40 out of 78 raised more than one type of animal (51%), and 45% indicate that sales of meat comprise the majority of their farm income.

Results

Nearly every respondent (88%) cited their processing situation as a barrier to expanding their farm business (Figure 2). Much of this group even ranked processing as a *moderate* or *extreme* barrier to expanding their business. Our statistical analysis examined exactly how farmers' processing options obstruct business growth. We found that farmers' levels of satisfaction with their processors' labelling and co-packing services, as well as whether they have their own on-farm processing, are significantly related to their view of how much processing services hinder their business development.

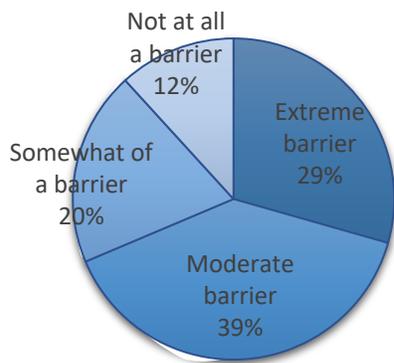


Figure 2. Percent of farmers indicating that processing is a barrier to their farm business.

More than 70% of respondents pass by processors closer to home to get better service. When asked about factors contributing to their decision to seek out a new processor, farmers ranked proximity to farm and cost as less important than factors such as ease of scheduling and assurance that a processor is returning all of the farmer's meat and/or that the meat returned is from their animals (Figure 3). One farmer describes their experience, "I'm not sure we got our beef back, and our hanging weights were below 50%. I advertise as grass-fed, grass-finished, so it's worrisome if the meat might not be mine and I'm not getting it all back. It affects my farm reputation and my bottom line." The critical issue for this farmer, and many others, is timing. "We could sell more if we could get in quicker."

Fifty-nine percent of respondents indicated a preference for vacuum packed, and one farmer described their strategy for lowering risk, "I am there when they cut and assist in packaging."

Scheduling is important. 67% of farmers have had to seek out a different processor because theirs was booked and could not schedule their animals for slaughter. Farmers reported having to schedule their animals for slaughter an average of 107 days (3½ months) in advance, with the responses ranging from 14 to 365 days. Ideally, farmers would like to book their processor 29 days in advance, according to respondents. One farmer described, "A fellow farmer donated their extra beef processing slot at a new-to-me processor, and the processor gladly accepted the change. At drop-off, the owner took time to speak with me, answer my questions, and make suggestions for future visits." Stories like this one illustrate the importance of good farmer-processor relationships for successful business collaboration.

A number of factors are important for building trust between farmers and meat processors, including: good treatment of animals, consistent meat quality, knowing meat was from farmer's animals, following a farmer's cutting instructions, accuracy of animals' live and hanging weight numbers, and accurate package labels (Figure 4).

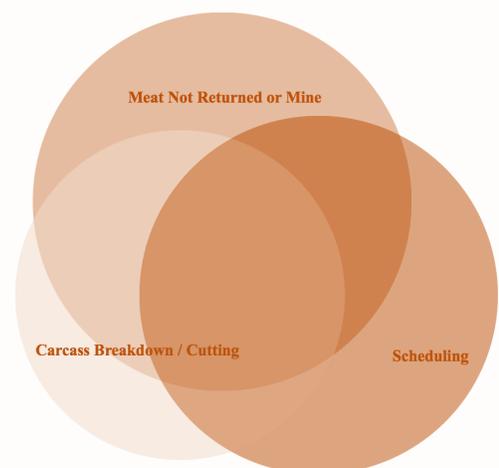


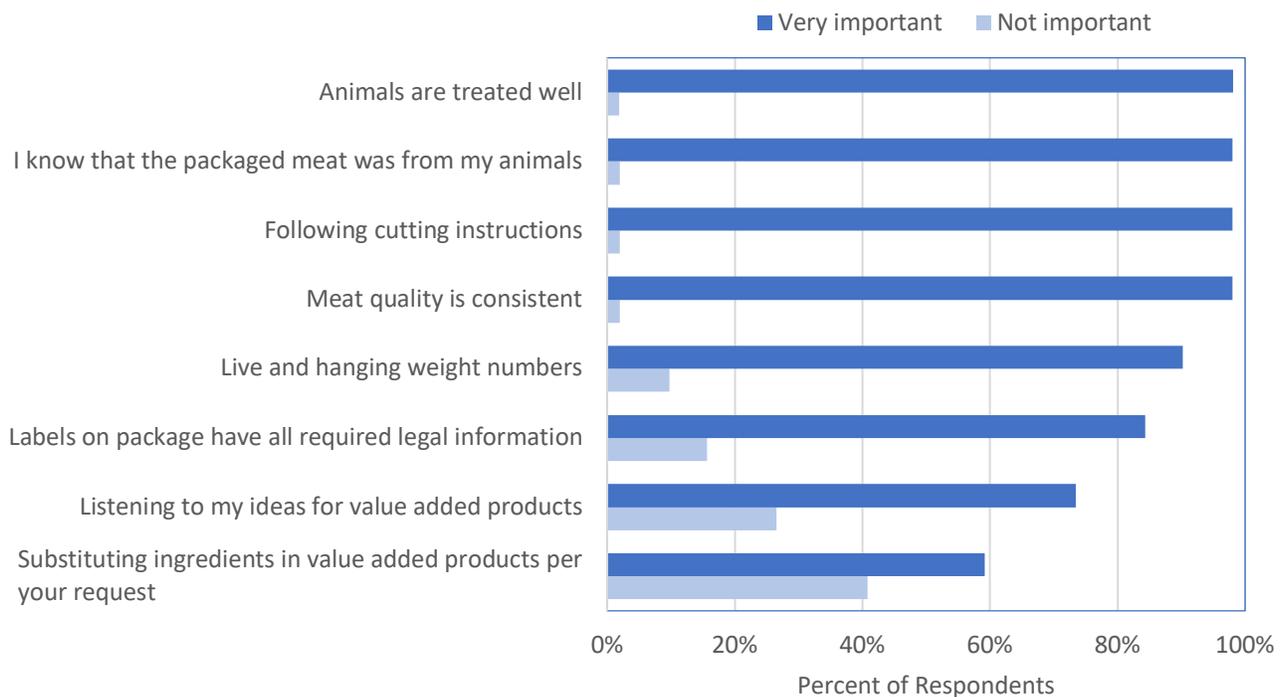
Figure 3. Proportional Venn diagram depicting overlap in top three reasons for changing processors.

One farmer described their break in trust, “I switched beef and lamb processors because the quality of service and honesty was an issue to me. When I was told my meat was ready for pickup, I expect frozen meat ready to go. It was not frozen. One time, we were told our meat was ready for pickup but when we arrived we had to wait 2 hours. When we did receive our meat back, it was not ours, and the meat was room temp. It seemed like they cut it up after we arrived to pick up the meat. We finally had to stop using this processor because they did not do the quality job we needed done and we could not trust them anymore.” Unfortunately, stories like this one were not uncommon among respondents.

Farmers going the route of on-farm processing revealed that the challenges to small-holder farmers extend far beyond their relationships with external processing facilities. For instance,

while other states’ Farm Bureau Insurance packages do cover on-farm stores, Indiana Farm Bureau (IFB) does not, driving some farmers to resort to out-of-state insurers to cover on-farm sales. This gap suggests an opportunity for IFB to more fully serve Indiana’s direct marketers and local food supply chains. Differing county interpretations of the Indiana Home Based Vendor (HBV) rule provide additional frustrations to farmers who chose to process on-farm. Most respondents raise more than one type of meat animal on their farm, and those that process poultry on-farm sometimes run into barriers in how county health departments interpret the state HBV rule that governs the 1,000-bird exemption. The HBV limits where poultry processed on-farm, and meat processed off-farm, can be sold, and whether they can be sold together. “I produce them together but I can’t sell them together,” said one farmer of his

Figure 4. Importance of trust factors between farmer and processor



animal products. As rural farmers often need to cross county lines to access markets, farmers need for their home counties and neighboring counties to work better together. As an example, county health departments should establish reciprocity with each other's permits and inspections. Regardless of county interpretations, some respondents found the present HBV to be limiting to business: ***"Home-based is good," said one respondent, "if you don't want to make a living off of it; if you want a hobby."***

Recommended Further Actions

We urge Indiana to follow states such as North Carolina, New York, and Vermont to convene a series of deliberate, focused conversations among farmers, processors, and their regulating agencies to examine and respond to the challenges farms and processors mutually face. Additionally, Indiana's regulators should explicitly support models underway in other states for solving bottlenecks to processing and other challenges, such as inspected mobile slaughter enterprises. The IFB could also make changes to address the gap in insurance coverage for on-farm vendors to better serve Indiana's direct marketers and local food supply chains.

The research from this survey focused on small-holder Indiana farmers who sell direct to consumer in their local and regional food markets, and we recommend similar research be conducted among meat processors who work with this scale of farming to better understand the challenges they face in their businesses. Gaining insight into issues such as managing workflows, employees, packaging, storage, etc., and any obstacles processors have to pursuing the Cooperative Interstate Shipment program,

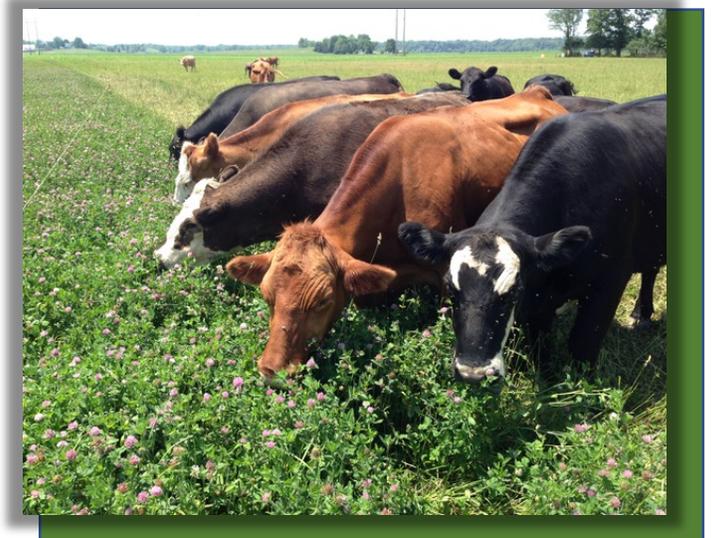
could help determine ways to facilitate better relationships with small farms and build stronger markets in the region.

Acknowledgements

We are grateful to the service providers who circulated the survey. We are grateful to Dr. David Bough from the Indiana Board of Animal Health and Lisa Harrison from the Indiana State Department of Health for reviewing the regulatory information. We also thank Drs. James Farmer and Shellye Suttles, Sustainable Food Systems Science, for their input, and Dr. Stephanie Dickinson and Jodi Byers of the IU School of Public Health Biostatistics Consulting Center for conducting data analysis.

References

- Denny, R. C. H., Worosz, M. R., & Wilson, N. L. W. (2016). The importance of governance levels in alternative food networks: The case of red meat inspection rules. *Rural Sociology, 81*(4), 601-634.
- Gwin, L., & Thiboumery, A. (2014). Beyond the farmer and the butcher: Institutional entrepreneurship and local meat. *Journal of Agriculture, Food Systems, and Community Development, 4*(2), 81-96.



Appendix 1. Agency, species and market channels and required level of inspection. Please note that meat, poultry, fish, or shrimp sold in local farmers markets and retail food establishments (RFEs) are subject to inspection by the County Health Department Inspector.

Indiana Agency	Species	Market Channel	Required level of inspection
State Board of Animal Health (BOAH)	Cow (Beef) Pig (Pork) Sheep (Lamb) Goat Meat animals	Direct to consumer	State or federal
		Direct to retailer (wholesale)	State or federal
		Personal consumption – not for sale	Custom Exempt
	Hunter harvested animals	Personal consumption – not for sale	Any: State, federal, custom exempt or on-farm processing
	Poultry	Direct to consumer or retailer (wholesale)	On-farm processing with BOAH Limited Permit Application
Indiana State Department of Health (ISDH)	Poultry Rabbit	Direct to consumer	State or federal or on-farm processing
		Direct to retailer	State or federal

Appendix 2: Glossary of terms

BOAH limited permits: Farmers processing poultry on-farm between 1-20,000 birds annually who want to sell to a retail food establishment (restaurant, grocer, food service) will need to apply to the BOAH Meat and Poultry Division for a ‘Limited Permit – Retail HRI’; farmers processing 1,000-20,000 birds annually and selling to end consumer will need to apply for a “Limited Permit – Household Consumer (HC)’

Cooperative Interstate Shipment (CIS): Some state facilities participate in the CIS program. Products bear a federal mark of inspection and can be distributed outside of Indiana to end consumers and wholesale buyers.

Custom Exempt: These operations must meet facility and sanitation requirements. Exempt establishments are not subject to daily inspection of slaughter and processing activities; therefore, these meat products will not bear a mark of inspection. Products must be labeled “Not for Sale” and go back to the animal owner for use exclusively in his/her household. The owner may use the products personally and for his or her nonpaying guests and employees, but may not transfer any custom-exempt product to another person or organization.

Direct to consumer: Product is sold directly to the ‘end consumer’ or the person who will be eating the food and not reselling (cooked or raw)

Farmers’ market: is a common facility where two or more farmers or growers gather on a regular basis to sell a variety of fruits, vegetables and other farm products directly to consumers

Federal Inspection: Animal is living and inspected for health by Federal Inspector, then slaughtered and processed at federally inspected facilities, where inspector has oversight of entire process, meat can be distributed to end consumers and wholesale buyers in any state in the US

Freezer meat trade: Products must be processed in an official establishment and bear a state or federal mark of inspection. Sales are subject to permitting by local health departments.

Home Based Vendor: Up to 1,000 birds (chicken and turkeys) and rabbits can be slaughtered and processed on farm and sold directly to consumers from the farm, at a farmers’ market (frozen) or on-farm stand (frozen or refrigerated)

Home Slaughter: Farmers can process their own meat and poultry for personal consumption and non-paying guests and employees, this meat cannot be sold

Meat: muscle derived from livestock further defined by Indiana 345 IAC 9-1-3 – Livestock is Cattle, Sheep, Swine, Goats, Bison, Water Buffalo and farm-raised Cervidae (elk, deer, caribou)

Retail Food Establishment (RFE): Restaurants, schools, hospitals, grocery stores, locations where food is processed and sold to consumers and regulated by county health departments under 410 IAC 7-24

State Inspection: Animal is living and inspected for health by Indiana Inspector, then slaughtered and processed at state inspected facility, where inspector has oversight of entire process, meat can be distributed to end consumers and wholesale buyers within Indiana

Authors

Jodee Ellett

Julia Valliant

Indiana University

Liz Brownlee

Nightfall Farm

Tricia Bower

Plumer-Bower Farmstead



This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the North Central Region SARE program under project number FNC18-1115. USDA is an equal opportunity employer and service provider. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view of the U.S. Department of Agriculture.

Helpful Resources:

Nightfall Farm

<http://www.nightfallfarm.com>
Liz and Nate Brownlee
Liz: (317) 258-5217 | Nate: (317) 532-7342
nightfallfarm@gmail.com

Plumer & Bowers Farmstead

<https://dennisandtricia.wixsite.com/plumberbowers>
Tricia and Dennis Bowers | (812) 216-4602
plumberbowersfarmstead@yahoo.com

Indiana State Board of Animal Health

<https://www.in.gov/boah/>
Meat & Poultry Inspection: Dr. David Bough
(317) 544-2406
dbough@boah.in.gov

Indiana State Department of Health, Food Protection Program

<https://www.in.gov/isdh/20640.htm>
317-234-8569
food@isdh.in.gov

Indiana University, Sustainable Food Systems Science

<https://sfss.indiana.edu>
sfss@iu.edu

Sustainable Agriculture Research and Education

<https://www.sare.org>

Additional resources found on Nightfall Farm's website:

Guide to starting a Farmer to Farmer Butcher Shop:

http://www.nightfallfarm.com/uploads/2/6/0/8/26083790/starting_a_butcher_shop_101_-_final.pdf

Guide to designing a small red meat plant from Iowa State University Extension:

http://www.nightfallfarm.com/uploads/2/6/0/8/26083790/guide_to_designing_a_small_red_meat_plant_iowa.pdf

Open source floor plan for a small 3-species slaughter and cut-up facility as well as a butcher-only facility:

http://www.nightfallfarm.com/uploads/2/6/0/8/26083790/butcher_shop_floorplan.pdf

