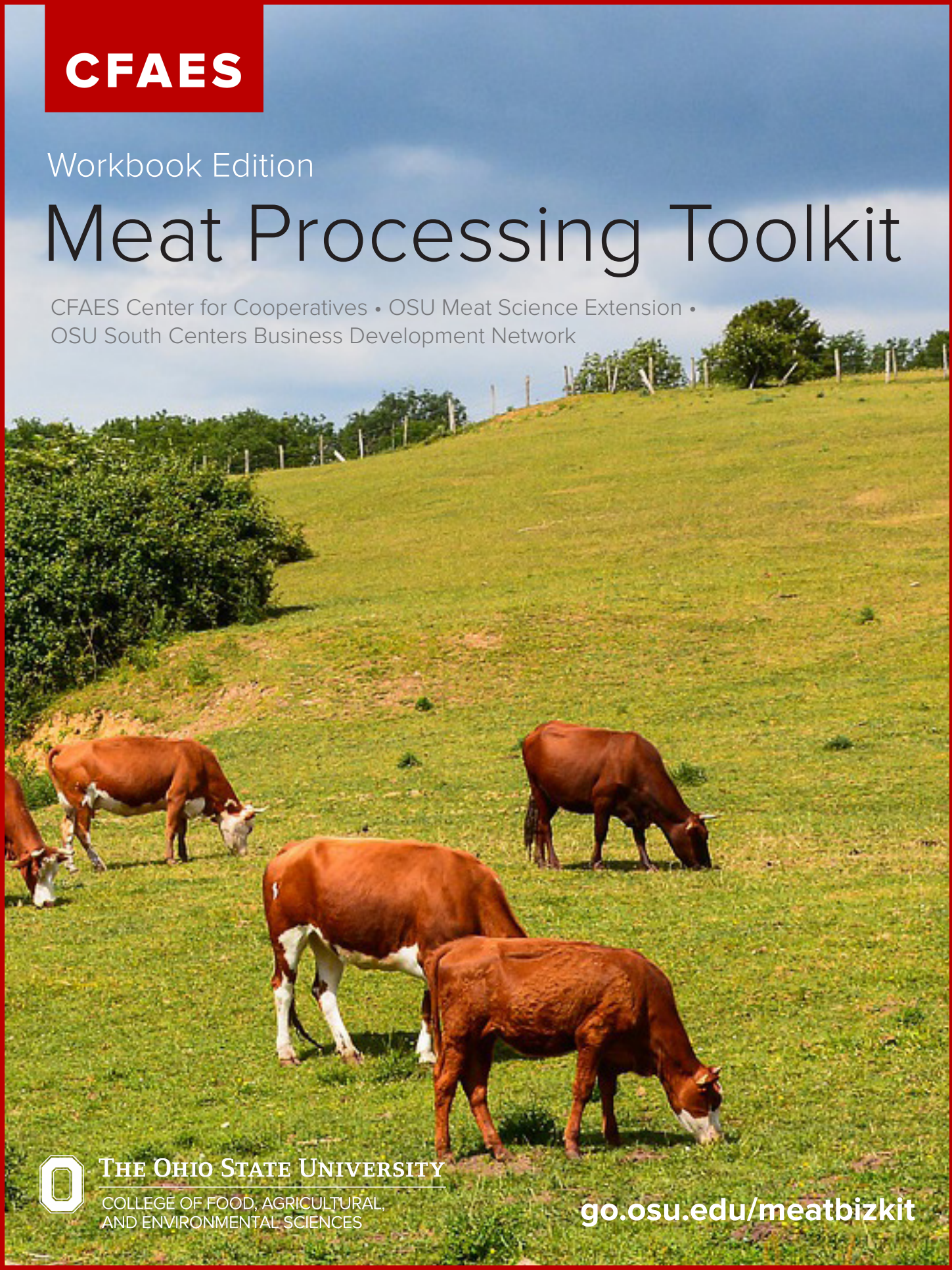
CFAES

Workbook Edition

# Meat Processing Toolkit

CFAES Center for Cooperatives • OSU Meat Science Extension •
OSU South Centers Business Development Network



The Ohio State University
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

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For downloadable, interactive worksheets in Microsoft Excel format, and digital PDF documents of the informational sections of this workbook, visit go.osu.edu/meatbizkit.


**Authorship**
This toolkit is a collaborative project between various experts within the College of Food, Agricultural, and Environmental Sciences at Ohio State, including Hannah Scott, Ryan Kline, Joy Bauman, Dr. Lyda Garcia, Dr. Lynn Knipe, and Kimberly Hostetler.
Graphic design by Bradford Sherman.

## Exploring a Meat Processing Business

This toolkit is a set of resources for entrepreneurs interested in starting or expanding a meat processing facility or those interested in exploring the industry. These resources are tools that entrepreneurs can use as aids in their decision-making processes. The tools in this kit are focused on Ohio, but can be replicated for other geographies. All these tools are meant to be individualized based on an entrepreneur's unique circumstances and goals. Using these tools does not guarantee success.

The tools in this kit are intended to be individualized and aid entrepreneurs with decision-making about meat processing enterprises. However, these resources do not anticipate every decision an entrepreneur will need to make and entrepreneurs will likely need to utilize additional tools and resources. For more assistance, please contact any of the staff located in the Contact Us portion for more help.

## Getting Started

In the early phases of exploring a new or expanded meat processing business, entrepreneurs may want to assess the potential need for an enterprise in their region by reviewing the region's livestock production, current meat processing capacity, and the various models for meat processing enterprises. On the following pages is a list of questions to review and answer before moving forward. Questions are designed to give readers an idea of the basic approach to getting involved in the meat industry.

# New Meat Processing Plants

# A Guide for Planning: Phase I

*Dr. Lyda Garcia, Extension Meat Specialist, Fresh Meats*

A meat processing plant is a business offering a service that takes a food animal and converts it into a retail product providing convenience for the consumer. Meat processors are critical to the agricultural industry, especially the food supply. Intentions to jump into this business is more complicated than what appears. Before investing time and money into the process, below are a series of questions that should be answered before pulling the trigger.

**Business structure:**

- Corporation
- Limited Liability Corporation (LLC)
- Cooperative (CoOp)

**Which specie is more profitable in your area?**

Beef, dairy, pork, lamb, goat, poultry and/or game

**Species of interest:**

Beef, dairy, pork, lamb, goat, poultry and/or game

**Type of Inspection:**

- Federal: products can enter inter-commerce
- State: products enter intra-commerce
- Custom: product cannot be sold, shall remain with family

**Number of head annually**

**Who's your audience?**

**Service(s) offered:**

- Slaughter (only)
- Processing (only)
- Slaughter and Processing
- Retail Sales
- Slaughter, Processing, and Retail Sales
- Smoked Products

**Are you interested in selling "commodity" or niche?**

**Is labor available within 60 mi radius?**

**Do you have land secured?**

**Do you have an existing building to use? Approved**

**Water Source?**

**Approved Sewage?**

| ITEM | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Business structure / Type of Enterprise** | Corporation | Partenership | | Limited Liability Corporation (LLC) | | Cooperative (CoOp) | |
| **Which specie is more profitable in your area?** | Beef | Dairy | Pork | Lamb | Goat | Poultry | Game |
| **Species of interest:** | Beef | Dairy | Pork | Lamb | Goat | Poultry | Game |
| **Type of Inspection:** | Federal | | | State | | Custom | |
| **Service(s) offered** | Slaughter | Processing | | Slaughter and Processing | Retail Sales | Slaughter, Processing, and Retail Sales | Smoked Products |
| **Estimated Number of head annually to process** | | | | | | | |
| **Is labor available within:** | 30 mi radius | | | 60 mi radius | | 75 mi radius | |
| **Selling Interest** | “Commodity” | | | Niche | | | |
| **Who is your audience?** | | | | | | | |
| **Do you have land secured?** | | | | | | | |
| **Do you have an existing building to use?** | | | | | | | |
| **Approved Water Source?** | Well water | | | Public | | | |
| **Approved Sewage System?** | Handled by Public System | | | Wastewater Treatment System | | | |

# New Meat Processing Plants

# A Guide for Planning: Phase II

*Dr. Lyda Garcia, Extension Meat Specialist, Fresh Meats*

| Category / Area | |
|---|---|
| Type of Enterprise | • Sole Proprietorship<br>• Partnership<br>• Co-operative<br>• Domestic Limited Liability Company<br>• Other (specify) |
| Business | Plant Type:<br>• Mobile unit<br>• Traditional plant to build<br>• Pre-existing plant |
| Inspection | • Federal (USDA),<br>• State (ODA),<br>• Custom (ODA)<br>• Cooperative Interstate Service (CIS)<br><br>Provide Contact and have paperwork ready |
| Location | Where are you planning to build?<br>Paved access and major highway access?<br>Make it as easy as possible for producers to get there and leave. |
| Livestock, Livestock Producers and Procurement | Who are the producer's customers? How reliable are they?<br><br>Where are they and what kind of commitment can we get from the producers? Can we get written commitments? |

| | |
|---|---|
| | How many species (#) will be processed weekly/annually? What percent cattle, sheep, goats, and hogs? Any wild game? |
| Equipment | Equipment needed for all livestock specie |
| Refrigeration/Electric/HVAC Floors/Cooler | Plans and company contracts |
| Holding Pens (if applicable) | Holding pen designs: Covered? Stressless handling is becoming a consumer issue. |
| Environment | Wastewater issues. Lagoons. Have you had any discussions with your state Department of Environmental Protective Agency Quality (EPA) and the Department of Agriculture? |
| Labor | How many is needed?<br><br>How do we hire qualified and reliable personnel? |
| Customers | Who are your customers? Do you know their demands and needs? |
| Markets | Will you help producers find markets? (if applicable)<br>Or do they already have the markets established? Steaks sell fast but where are they going with their ground meat?<br>How would your product differ from existing meat products in the market? |
| Building Plans | Have you found a qualified architect to draft blueprints, one who has designed successful processing plants in the past? One possibility is a license to use plans already proven successful |
| Contractor(s) | How do you find a qualified general contractor to build the plant? |

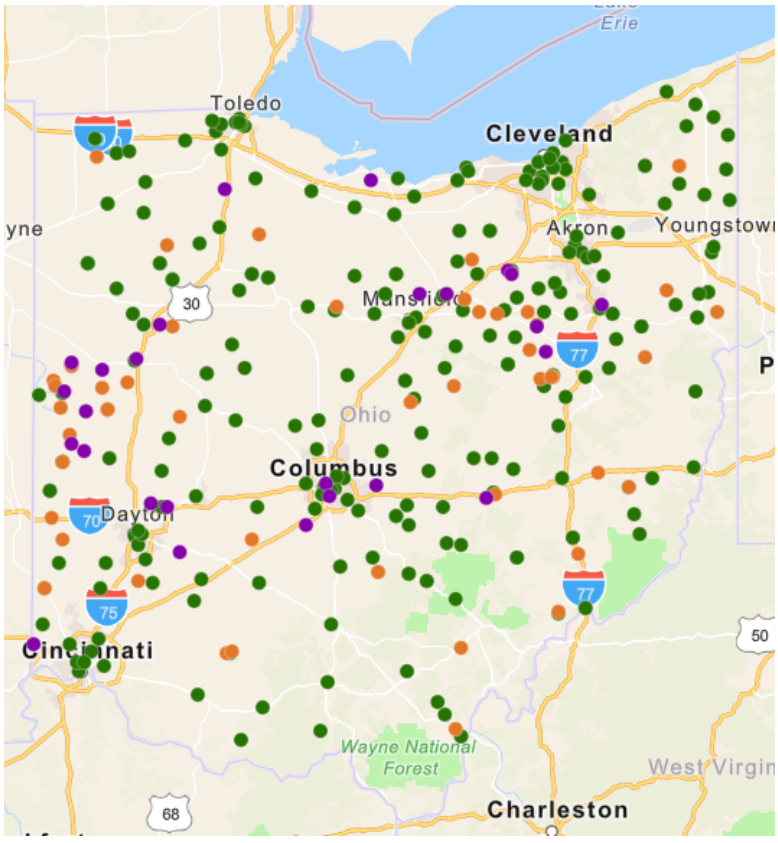
# Understanding the Capacity of the Region

*Ryan Kline, Cooperative Development Specialist, CFAES Center for Cooperatives*

The below map and the tables on the following pages can help entrepreneurs explore the potential need for a meat processing facility in their region based on current processing capacity and livestock production. Entrepreneurs can adapt this data for a specific geographic area

Consult the tables on the following pages for livestock inventory numbers, by species, for each county in the Ohio based on data from the U.S. Department of Agriculture 2017 Census of Agriculture. “Inventory” in this data set refers to livestock that is a part of the continual stock. Find more information about this data by reading the 2017 USDA Census of Agriculture Report.

## Ohio's State and Federal Slaughter Facilities and Auction Sites




A map of meat processing and auction sites across Ohio.

When assessing the current meat processing capacity of a region, it is important to be systematic.

In Ohio, as of December 2020, there were 26 USDA inspected slaughter facilities; 261 Ohio Department of Agriculture inspected facilities, and 52 USDA inspected auction sites. If you have questions about this map, reach out to the CFAES Center for Cooperatives at 740-289-2071 (Ext 111).

Note that some facilities especially if formed after December 2020, may not to be included on the map.

- **USDA Inspected Facility**
- **Ohio Inspected Facility**
- **Auction Site**

## Livestock inventory numbers, by species, for each county in Ohio

| County | Goats | Sheep | Hogs | Beef Cattle | Dairy Cattle |
|---|---|---|---|---|---|
| Adams | 1,051 | 1,152 | 996 | 12,625 | 1,805 |
| Allen | 622 | 962 | 178,781 | - | - |
| Ashland | 1,002 | 3,088 | 24,493 | 3,692 | 7,079 |
| Ashtabula | 880 | 1,008 | 676 | 1,906 | 4,103 |
| Athens | 1,684 | 2,316 | 319 | 4,461 | 327 |
| Auglaize | 411 | 803 | 110,134 | 1,389 | 6,140 |
| Belmont | 1,478 | 1,308 | 95 | 11,285 | 769 |
| Brown | 514 | 491 | 419 | 8,054 | 603 |
| Butler | 823 | 1,183 | 14,264 | 4,583 | 333 |
| Carroll | 962 | 1,712 | - | 5,783 | 3,086 |
| Champaign | 1,025 | 739 | 25,712 | 2,658 | 1,129 |
| Clark | 873 | 451 | 18,259 | - | - |
| Clermont | 1,460 | 276 | 288 | 2,905 | 17 |
| Clinton | 735 | 1,607 | 15,918 | 2,167 | 500 |
| Columbiana | 585 | 1,733 | 5,599 | 6,361 | 8,740 |
| Coshocton | 1,286 | 3,542 | 70,578 | 8,196 | 3,237 |
| Crawford | 247 | 421 | 128,770 | 856 | 1,709 |
| Cuyahoga | 15 | - | - | - | - |
| Darke | 573 | 1,175 | 240,196 | 2,680 | 8,576 |
| Defiance | 506 | 468 | 13,938 | 901 | 4,676 |
| Delaware | 408 | 1,803 | - | 1,216 | 319 |
| Erie | 125 | 410 | 85 | 1,100 | 218 |
| Fairfield | 1,348 | 1,432 | 19,603 | 3,328 | 787 |
| Fayette | 469 | 1,556 | - | 1,096 | 2,971 |
| Franklin | 602 | 879 | - | 518 | - |
| Fulton | 455 | 767 | 15,196 | 1,246 | 2,934 |
| Gallia | 1,241 | 1,829 | 668 | 9,468 | 117 |
| Geauga | 479 | 1,648 | 1,349 | 1,093 | 3,238 |
| Greene | 554 | 1,064 | 33,517 | 2,444 | 745 |
| Guernsey | 1,202 | 1,070 | 7,005 | 10,547 | 519 |
| Hamilton | 235 | 254 | - | - | - |
| Hancock | 315 | 1,569 | 44,604 | 463 | 1,018 |
| Hardin | 249 | 643 | 68,374 | 2,330 | 9,445 |
| Harrison | 331 | 2,388 | 396 | 6,543 | 263 |
| Henry | 66 | 280 | 10,387 | 474 | 1,937 |
| Highland | 1,588 | 3,105 | 15,415 | 9,233 | 1,973 |
| Hocking | 302 | 398 | 130 | 1,304 | 13 |
| Holmes | 1,559 | 6,447 | 4,461 | 5,222 | 17,318 |
| Huron | 363 | 2,699 | 12,821 | 1,023 | 2,966 |
| Jackson | 221 | 346 | 174 | 5,204 | 282 |
| Jefferson | 459 | 649 | 291 | 4,879 | 265 |
| Knox | 1,573 | 7,901 | 34,406 | 7,421 | 3,418 |
| Lake | 42 | 176 | 72 | 216 | 122 |
| Lawrence | 627 | 353 | 138 | 3,341 | 68 |

## Livestock inventory numbers, by species, for each county in Ohio

| County | Goats | Sheep | Hogs | Beef Cattle | Dairy Cattle |
|---|---|---|---|---|---|
| Licking | 1,386 | 3,509 | 24,578 | 7,503 | 4,682 |
| Logan | 1,197 | 2,628 | 16,913 | 2,226 | 3,409 |
| Lorain | 438 | 1,029 | 11,166 | 1,138 | 1,708 |
| Lucas | 73 | 412 | 8,932 | - | - |
| Madison | 385 | 590 | 10,421 | 1,452 | 5,628 |
| Mahoning | 619 | 796 | 548 | 2,478 | 5,016 |
| Marion | 410 | 1,285 | 88,499 | 1,031 | 4,039 |
| Medina | 618 | 1,456 | 802 | 1,869 | 2,051 |
| Meigs | 297 | 448 | 567 | 5,203 | 528 |
| Mercer | 261 | 1,465 | 317,040 | 2,782 | 17,490 |
| Miami | 740 | 1,906 | 13,320 | 1,514 | 1,334 |
| Monroe | 856 | 3,017 | 217 | 6,658 | 715 |
| Montgomery | 262 | 419 | - | 985 | 264 |
| Morgan | 551 | 756 | 4,930 | 6,748 | 993 |
| Morrow | 1,182 | 3,302 | - | 1,928 | 1,577 |
| Muskingum | 967 | 3,303 | 16,113 | 12,945 | 1,053 |
| Noble | 522 | 2,740 | 67 | 6,390 | 44 |
| Ottawa | 100 | 274 | 14 | 190 | - |
| Paulding | 688 | 198 | 61,268 | 658 | 10,232 |
| Perry | 1,001 | 938 | 16,032 | 4,609 | 152 |
| Pickaway | 489 | 1,062 | 1,999 | 2,155 | 1,775 |
| Pike | 608 | 279 | - | 3,493 | 375 |
| Portage | 1,058 | 1,147 | 591 | 2,275 | 1,392 |
| Preble | 1,004 | 1,720 | 33,747 | 3,421 | 1,119 |
| Putnam | 803 | 1,269 | 119,011 | 1,426 | 4,982 |
| Richland | 616 | 1,377 | 78,633 | 3,748 | 8,340 |
| Ross | 799 | 1,179 | 478 | 6,407 | 1,552 |
| Sandusky | 426 | 515 | 5,489 | 939 | 1,030 |
| Scioto | 570 | 155 | 278 | 5,063 | 307 |
| Seneca | 617 | 2,623 | 40,630 | 1,518 | 362 |
| Shelby | 287 | 660 | 73,160 | 1,872 | 7,716 |
| Stark | 709 | 2,012 | 3,226 | 3,767 | 7,611 |
| Summit | 361 | 219 | 102 | - | - |
| Trumbull | 477 | 401 | 393 | 1,700 | 2,750 |
| Tuscarawas | 1,105 | 2,449 | 6,212 | 5,937 | 9,105 |
| Union | 641 | 1,829 | 31,995 | 1,794 | 1,944 |
| Van Wert | 173 | 622 | 76,417 | 1,187 | 3,560 |
| Vinton | 52 | 136 | 78 | 1,544 | 57 |
| Warren | 475 | 751 | 312 | 2,326 | 12 |
| Washington | 735 | 1,497 | 2,293 | 9,053 | 2,177 |
| Wayne | 1,790 | 8,202 | 77,965 | 6,018 | 33,772 |
| Williams | 681 | 1,149 | 17,693 | 1,181 | 4,856 |
| Wood | 849 | 465 | 973 | - | - |
| Wyandot | 189 | 1,211 | 54,058 | 757 | 1,894 |
| **Ohio Total** | **59,612** | **127,501** | **2,561,252** | **300,681** | **269,069** |

| | Top 10 Goat Counties | # of Animals |
|---|---|---|
| 1 | Wayne | 1,790 |
| 2 | Athens | 1,684 |
| 3 | Highland | 1,588 |
| 4 | Knox | 1,573 |
| 5 | Holmes | 1,559 |
| 6 | Belmont | 1,478 |
| 7 | Clermont | 1,460 |
| 8 | Licking | 1,386 |
| 9 | Fairfield | 1,348 |
| 10 | Coshocton | 1,286 |

| | Top 10 Beef Cattle Counties | # of Animals |
|---|---|---|
| 1 | Muskingum | 12,945 |
| 2 | Adams | 12,625 |
| 3 | Belmont | 11,285 |
| 4 | Guernsey | 10,547 |
| 5 | Gallia | 9,468 |
| 6 | Highland | 9,233 |
| 7 | Washington | 9,053 |
| 8 | Coshocton | 8,196 |
| 9 | Brown | 8,054 |
| 10 | Licking | 7,503 |

| | Top 10 Sheep Counties | # of Animals |
|---|---|---|
| 1 | Wayne | 8,202 |
| 2 | Knox | 7,901 |
| 3 | Gallia | 7,829 |
| 4 | Holmes | 6,447 |
| 5 | Coshocton | 3,542 |
| 6 | Licking | 3,509 |
| 7 | Muskingum | 3,303 |
| 8 | Morrow | 3,302 |
| 9 | Highland | 3,105 |
| 10 | Ashland | 3,088 |

| | Top 10 Dairy Cattle Counties | # of Animals |
|---|---|---|
| 1 | Wayne | 33,772 |
| 2 | Mercer | 17,490 |
| 3 | Holmes | 17,318 |
| 4 | Paulding | 10,232 |
| 5 | Hardin | 9,445 |
| 6 | Tuscarawas | 9,105 |
| 7 | Columbiana | 8,740 |
| 8 | Darke | 8,576 |
| 9 | Richland | 8,340 |
| 10 | Shelby | 7,716 |

| | Top 10 Hog Counties | # of Animals |
|---|---|---|
| 1 | Mercer | 317,040 |
| 2 | Darke | 240,196 |
| 3 | Allen | 178,781 |
| 4 | Crawford | 128,770 |
| 5 | Putnam | 119,011 |
| 6 | Auglaize | 110,134 |
| 7 | Marion | 88,499 |
| 8 | Richland | 78,633 |
| 9 | Wayne | 77,965 |
| 10 | Van Wert | 76,417 |

### Considering Different Models

There are many different types of meat processing enterprises, from cooperatives and corporations to mobile slaughter units and high-volume slaughterhouses. This bulletin explores models that have been used around the United States to develop or expand local meat processing enterprises via farmer engagement, partnership, or investment. This is not an exhaustive list of meat processing models. It is a review of some innovative models utilized by producers and processors.

# Farmer-Focused Models for Local Meat Processing

*Hannah Scott, Program Manager, CFAES Center for Cooperatives*
*Ryan Kline, Cooperative Development Specialist, CFAES Center for Cooperatives*

As the COVID-19 pandemic surged in the spring of 2020 and some meat processing plants in the U.S. closed or reduced processing capacity, the effects were felt throughout the supply chain (Cowley, 2020). As meat processing capacity declined significantly for a period, consumer demand for meat shifted rapidly to purchasing for home consumption. At the same time, producers faced low livestock prices and challenges with finding processing and markets for their livestock (Cowley). Meat producers selling into local and regional supply chains have had challenges finding processing capacity to grow their operations for years. Like so many other economic issues, the COVID-19 pandemic exacerbated the challenge.

Farmers and other local and regional meat supply chain stakeholders have reacted to these challenges, in part, by exploring opportunities to enhance the resilience of local and regional meat supply chains, particularly through improved processing capacity. This bulletin will explore models that have been used around the United States to develop or expand local meat processing enterprises via farmer engagement, partnership, or investment. However, the cases shared here are not comprehensive. There are likely many additional strategies to enhance local and regional meat processing capacity that are not discussed in this bulletin but are viable opportunities for meat supply chain stakeholders.

## Keys to Success in Local Meat Processing

Before exploring opportunities to enhance local and regional meat processing, stakeholders should understand the challenges of the industry, both at a national scale and in their region. A 2013 study by the U.S. Department of Agriculture's (USDA) Economic Research Service indicated that "stabilizing and enhancing meat and poultry processing for local markets requires that farmers and processors build more established and predictable business relationships, shifting from "convenience" to longer-term "commitment"" (Gwin et al., 2013, p. iv).

Important findings of the report included:

- "Key "anchor" customers are critical for processors to ensure a steady volume of business" (Gwin et al., 2013, p. iv). Anchor customers can be one or two large farms, a processor who produces livestock and acts as their own key customer, and aggregators that coordinate livestock from multiple farms and, sometimes, serve additional marketing or coordination functions.
- It is important for processors to demonstrate a commitment to customers, including via high-quality processing services. Processors can provide value to customers by providing additional advice and support with other aspects of the meat business, like marketing and distribution. (Gwin et al., 2013)
- "Farmer-processor commitment deepens when farmers, individually or in groups, invest time and money into the processing business. Investment can take the form of loans, stock purchases, equipment financing, or hours of expertise and effort" (Gwin et al., 2013, p. v).
- Communication is key. Continuous and effective communication between processors and farmers is key to building and maintaining strong relationships (Gwin et al., 2013).

In USDA's study assessing local meat and poultry processing, interviews with meat supply chain stakeholders including farmers, processors, regulators, university faculty, and non-governmental organization staff revealed the challenges listed in Figure 1 below (Gwin et al., 2013). Although interviews were conducted in 2011 and 2012 (Gwin et al., 2013), these are also some of the challenges that the authors hear from meat supply chain stakeholders in 2020.

Table 2
**Farmer and processor concerns about processing**

| What farmers say | What processors say |
|---|---|
| There are not enough processing facilities.[1] | There aren't enough farmers bringing me enough livestock. |
| Processors don't have the right services or inspection status. | Farmers ask me to do new things, but they don't have enough volume to cover my costs. |
| I have to schedule a processing date too far in advance. | Farmers don't come when they say they will, or they bring fewer or different animals than they said they would bring. |
| I can't get a processing date during the fall. | I have no business in the spring. |
| Processing costs too much. | Farmers don't want to pay what processing really costs. |
| Processors make cutting, packaging, and labeling mistakes. | I don't have enough year-round, steady business to hire skilled labor and pay them a good wage. |
| My order wasn't ready on time, and my customers are unhappy. | Farmers don't pick up their orders on time, using up valuable cooler space. |

[1]Particularly for poultry: there are far fewer inspected poultry plants than red meat plants, in part because profit margins are thinner, in part because many States allow the sale of poultry processed under one of the Federal exemptions, and in part because poultry production at smaller scales is typically very seasonal. Farmers must cross State lines for federally inspected processing or be shut out of the market in States that do not allow such sales and in which there is no inspected small plant.

*Figure 1: "Farmer and processor concerns about processing" from U.S. Department of Agriculture, Economic Research Service, Local Meat and Poultry Processing: The Importance of Business Commitments for Long Term Viability (Gwin et al., 2013, p. 5).*

## Case Summaries

The following case study summaries show some of the innovative strategies that meat producers and processors are implementing to expand the processing capacity in their regions. It is beyond the scope of this bulletin to discuss each case in comprehensive detail, but readers wishing to learn more can explore the resources that are shared along with each summary.

## Farmer-Owned Cooperative Processing Enterprises

**Bay Area Ranchers Cooperative (BAR-C), California**
In July 2020, the Bay Area Ranchers Cooperative formed to purchase a USDA-inspected mobile slaughter unit and cut-and-wrap facility (Ricker, 2020), to handle cattle, sheep, goats, and hogs (Bay Area Ranchers' Cooperative, Inc., 2020). Ranchers wanted to stop traveling hours for livestock processing and increase the area's processing capacity because fuel costs were cutting into their bottom lines and the processing bottleneck required extensive planning for livestock harvesting and marketing (Ricker, 2020).

Funding Model
BAR-C requires an equity investment from members, which will provide part of the $500,000 the group estimates is needed to fund the operation's start up (Bay Area Ranchers' Cooperative, Inc., 2020; Ricker, 2020). The co-op is raising funds from non-member, non-voting investors and will charge fees for processing services (Bay Area Ranchers' Cooperative, Inc., 2020).

Farmer Engagement
Co-ops are owned and controlled by their members, typically through a board of directors, and generally share profit based on members' use of the business (Frederick, 2005).

For more information see *Ranchers Form Co-Op to Address Meat Processing Bottleneck* by Hannah Ricker and the Bay Area Ranchers Cooperative website.

**Island Grown Farmers' Cooperative, Washington**
Island Grown Farmers' Cooperative (IGFC) was formed in the early 2000's with assistance from Lopez Island Community Land Trust (LCLT) (Gwin et al., 2013). Today, IGFC provides mobile processing across five counties in Northwestern Washington and has eighty farmer-owners (Allison, 2020). The co-op began operating the country's first USDA-inspected mobile slaughter facility in 2002 and operates a brick-and-mortar cut-and-wrap facility for bison, cattle, sheep, goats, and hogs (Gwin et al., 2013). Members schedule the unit's visits to their farm at their annual meeting and instituted policies to ensure consistent throughput, including incentives for members slaughtering during slow seasons (Gwin et al., 2013). In 2020, IGFC announced plans for a new processing facility with increased capacity (Allison, 2020).

Funding Model
- The slaughter unit was initially owned by LCLT, which raised $150,000 from donations and USDA grants, and IGFC leased the unit (Gwin et al., 2013). IGFC purchased the unit in 2012 (Gwin et al., 2013). IGFC has received member loans for capital needs like equipment and charges fees to cover costs or generate a profit for reinvestment (Gwin et al., 2013).
- IGFC expects a new processing facility will cost $1.3 million (Allison, 2020). The port where the facility will be located has received $60,000 in grants and $180,000 in low-interest loans for facility development (Allison, 2020).

Farmer Engagement
- Farmer-members own and control IGFC and hired employees carry out business functions (Gwin et al., 2013). IGFC is governed by a board of directors who were integral as the co-op developed -- a director originally served as the facility's hazard analysis and critical control points (HACCP) coordinator (Gwin et al., 2013).

For more information see *Island Grown Farmers Co-op to build new meat processing facility* by Jacqueline Allison and Island Grown Farmers Co-op website.

## Farmer Investment in Processing Enterprises

While the case summary below highlights an example of a customer investing capital in the business for facility financing, there are multiple ways that farmer-customers can invest time and money into processing enterprises, including loans, stock or other equity investments, or sharing their expertise or effort (Gwin et al., 2013).

**Smucker's Meats, Pennsylvania**
Smucker's Meats is a multi-generational family business founded in 1965 (Gwin et al., 2013). At first, the company was a custom-exempt butcher shop (Gwin et al., 2013). Today, the company offers full-service slaughter, fabrication, and value-added processing, such as dry aging, no nitrate processing, and processing of hotdogs, snack sticks, sausage, and more, in a USDA-inspected facility ("How We Operate"; "Smucker's Meats"). Smucker's became USDA-inspected in the early 2000's (Gwin et al., 2013) and now processes beef, bison, and pork on a fee-for-service basis ("How We Operate"). They also support producers beyond processing – for example, by offering customers the option to use customized labels and services for customers seeking approval of special labeling claims on their packaging ("How We Operate").

Funding Model
In the transition to USDA-inspection, facility upgrades were financed by a nearby natural meat company that needed additional processing capacity (Gwin et al., 2013).

Farmer/Customer Engagement
- A key customer funded facility upgrades necessary to transition to USDA-inspection (Gwin et al., 2013).
- Smucker's processing business serves many producers, but a portion of those producers are considered "anchor customers" who provide a greater number of livestock for processing on a more regular basis than other customers (Gwin et al., 2013).
- Smucker's Meats has a working relationship with customers and provides support and services beyond processing. For instance, the company's website includes a listing of local farmers selling beef and pork in their region ("How We Operate"). Additionally, when producers are looking for processing but Smucker's schedule is full, Smucker's maintains a cancelation list of those producers ("How We Operate"). Smucker's calls producers each week to confirm their processing schedule and when there are cancellations in the schedule, Smucker's calls producers from the cancelation list to fill the schedule ("How We Operate").

For more information see Smucker's Meats Website.

## Farmer Relationships with Processing Enterprises

Individual farmers can maintain strong, committed relationships with meat processing enterprises in their region. As the 2013 report "Local Meat and Poultry Processing" by USDA shared, "Effective and continuous communication – about scheduling and services, costs and pricing, meat quality, and market conditions – is essential to developing and maintaining strong business relationships" (Gwin et al., 2013, p. v).

As described in the report by Gwin et al. (2013), it can also be beneficial for processors to work with a group of farmers who aggregate livestock from multiple farms and coordinate meat marketing and distribution. These "aggregators" can ensure a more consistent supply of livestock than a single producer and create a single point of communication between the processor and multiple producers (Gwin et al., 2013). In some cases, processors act as the aggregator, buying livestock from multiple producers, processing the livestock, and marketing meat under their own brand (Gwin et al., 2013).

**Patchwork Family Farms, Missouri**
In 1993, the Missouri Rural Crisis Center (MRCC), a farm and rural membership organization whose mission is to "preserve family farms, promote stewardship of the land and environmental integrity and strive for economic and social justice by building unity and mutual understanding among diverse groups, both urban and rural," ("About") began organizing Patchwork Family Farms ("History"). Patchwork Family Farms is a cooperative of family farmers marketing pork to customers regionally and even nationally and continues to be a project of the MRCC (Fahy, 2020; Siess, 2019). As of 2019, Patchwork included 12-15 farmer members and sold pork under the Patchwork brand to over 50 restaurants and stores (Siess, 2019). Collective marketing gives independent producers access to local markets like grocery stores and restaurants ("History"). Patchwork maintains a storefront for direct sales to consumers at the MRCC office in Columbia, Missouri ("Find Our Products"). Patchwork maintains relationships with four independent processors in Missouri ("Our Producers"). Amid the challenges with meat processing exacerbated by the COVID-19 pandemic in 2020, Tim Gibbons of MRCC explained, "Luckily for Patchwork, we have dates [for processing] scheduled into the future and we're bringing in more hogs than ever. That comes from long relationships and the trust that we've built over many years" (Fahy, 2020).

Funding Model
The co-op is not formally invested in a processing enterprise.

Farmer Engagement
- The co-op markets pork on behalf of 12-15 independent farmers under the Patchwork Family Farms brand (Siess, 2019). The co-op purchases hogs from producers and markets and distributes pork after it has been processed ("History").
- Patchwork publicizes that they work with local processors. Patchwork's website shares a profile of one of the processors they work with in Hale, Missouri with a quote from the processor sharing, "We benefit from a reliable and consistent source of income from Patchwork Family Farms that is beneficial to both our business and Patchwork's"(*Our Producers*).

For more information see the Patchwork Family Farms website and the Patchwork Family Farms Facebook.

## Nontraditional Meat Processing Enterprises

**Nelsonville Food Hub and Meat Fabrication Facility, Ohio**
The Nelsonville Business Center and Food Hub in Nelsonville, Ohio, is an approximately 95,000 square foot facility that includes food distribution and warehousing space, cold storage, and a Food & Farm Enterprise Center with produce and meat processing facilities, to support the region's local and food and farm businesses ("Nelsonville Business Center and Food Hub"). The facilities are operated by the Appalachian Center for Economic Networks (ACEnet), a non-profit community-based economic development organization providing business incubation support to food entrepreneurs ("Mission & History"). The Food & Farm Enterprise Center includes a 500 square-foot, state-inspected meat processing room equipped with meat processing and packaging equipment for cutting, grinding, mixing, sausage stuffing, vacuum packing, and blast chilling (Kight, 2017; Willard, 2018). Producers must have livestock slaughtered at another facility and are responsible for their own labor (Kight, 2017). The facility opens new opportunities for small businesses by allowing them to increase production levels and efficiency (Kight, 2017). ACENet also provides technical assistance to entrepreneurs with business aspects like labeling, packaging, and market access (Kight, 2017).

Funding Model
The meat processing and companion produce processing facility required approximately $315,000 (Willard, 2018). Funding was secured from the Appalachian Regional Commission and USDA Rural Development (Kight, 2017).

Farmer Engagement
- Producers and entrepreneurs can use the facility to process meat in a state-inspected cut and wrap facility (Kight, 2017).
- ACENet provides technical assistance to food and farm entrepreneurs from help with product labeling and packaging to business planning and market access (kight, 2017).
- The Food & Farm Enterprise Center was created in response to a lack of meat processing options for farmers in the region (Kight, 2017).

For more information see ACENet's website with information about the Nelsonville Business Center and Food Hub.

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## Moving Forward

As entrepreneurs explore the opportunity to start or expand a meat processing enterprise, it is helpful to develop a business plan and assess the financial requirements of the future venture. The tools below are intended to help entrepreneurs develop informed, comprehensive plans that can be utilized to make decisions about the opportunity. Entrepreneurs may also use business and financial plans in obtaining loans for a business.

### Business Planning

A business plan can help entrepreneurs communicate their ideas, identify areas they have not considered, and develop their understanding of the industry and business they are exploring. Entrepreneurs can use the following documents as templates for writing a business plan. In developing the plan, entrepreneurs will answer important questions like: How will the business be managed? How will the business market its products or services? What is the business's competitive factor?

# Business Plan

Business Name - Type your information in the areas shaded in gray. When completed, delete text provided in this outline.

You may want to enter a picture or graphic

Address

Date

**Section I: Executive Summary**

*The Executive Summary comes first, but can be written last, after the Human Resources, Operations, Marketing, Finance and Strategic Planning & Management sections are completed.*

**A. Company Overview**

*1. Company Name*
*2. Location (benefits, limitations, zoning)*
*3. Legal Structure & When Formed*
*4. Type (service, retail, manufacturing, construction)*
*5. Size (sales, # of employees, sq. ft.)*
*6. History Highlights*
*7. Mission – Why you exist (values)*
*8. Vision – Where you want to go (nonspecific, directional, motivational)*
*9. Important company features (customers, employees, other Stakeholders value)*

**B. Nature of the Business**

*1. What product/service you sell?*
*2. For what need/problem/opportunity? (Benefit to buyer?)*
*3. For what market area and target audience (market potential)*
*4. What are the alternatives to your product/service? (competitive advantage)*

**C. Key Characteristics of the Industry**

*Brief Summary of the Size of the Industry, Types of Businesses, History, Trends, Critical Issues and Your Business "Fit" in the Industry.*

**D. Brief Financial Highlights**

Sales Forecast, Breakeven Point, Financing if needed – how much & for what/when payback

**E. Strategic Management**

1. How you are addressing internal strengths and weaknesses & external opportunities and threats?
2. Summary of short range & long range goals.
3. Key measurable "drivers" that impact your costs, revenue and business goals? (ratios such as # of clients per year, # of projects per year, average $ per client, return on investment, # of employees per $, inventory turns, product rejection rate, quality, capacity, cost of lead/sale, etc.)

**F. Compelling, Market-Driven Reason Why This Business Will**

**Succeed *Your Identity - 30 Second "Commercial" (elevator statement - Benefits to the customer)***

## Section II: Management

### Human Resources

**A. Owner, Manager/s**

(experience and key skills – skill level)

**B. Employees**

HR Policies & Procedures (Job analysis and job descriptions, hiring strategy, compensation, performance evaluation process, employee training, retention, motivation)

**C. Consultants & Advisors**

(Attorney, Accountant, Insurance Agent, etc.)

**D. Organizational Structure/Communications**

(job descriptions - who does what and reports to whom?)

**E. Individual & Organizational Development**

As the business owner, how will you prepare for ongoing continuous improvement for yourself and others throughout the organization?

**F. Management Strategies**

How will you make the most of the people involved with your business? What can you delegate or outsource? What help and support do you need? How would you describe your organizational culture?)

### Operations

**A. Location & Equipment**

Where is the business located & conducted? (why: features? any zoning issues?) What equipment and inventory items are required to start and run your business? What do you currently own? what will you lease? What will you purchase?

**B. Hours of Operation**

When does your business operate? (regular business hours, seasonal/special events)

**C. How do you Design, Source, Purchase, Produce and Distribute?**

New Product Development/Sourcing, Production & Inventory Procedures/Sales & Distribution/Quality

**D. Data Management**

How do you manage data (entry, processing, back-up, contacts, correspondence, bookkeeping, other files)?

**E. Intellectual Property**

How do you protect designs, copyrights and other intellectual property?

**F. Risk Management**

How do you manage risk? (prevent & protect)
Financial, Liability, Environmental and Safety, Security, Record
- Retention & Security of data – company, employee, customer, supplier
- Political Risks, Legal Risks, Loss, Decline/Growth, Other

**G. Insurance**

What have you learned from an insurance broker about costs/types of insurance you need?

**H. Taxes**

Which local, state and federal regulations and taxes apply to your business?

**I. Licenses & Permits**

What permits and licenses have you determined apply to your business?

**J. Business Cycles**

What do you know about your business cycles? (Production, Delivery, Sales, Inventory, Financials)

**K. Operational Strategies**

How will you make the most of you location, purchasing & production processes?

**Section III: Marketing**

*This information can be taken from your Marketing Plan Developed from the Marketing Plan Template.*

**A. Business, Industry & Situation Overview**

General description of the business.

**C. Target Market & Trade Area**
Who is your target market (who & where)?

**D. Products/Services**
Product/Service - What need/problem/opportunity?

**E. Competitive Advantage**
What is your competitive advantage/positioning?

**F. Marketing Strategies**
What are your overall marketing strategies?

**G. Sales Forecasts and Assumptions**
How much money will you generate? Include a sales forecast summary and narrative on your assumptions - how you developed projected revenue.

**H. Measures of Success**
What are the key factors you will measure and when will you measure them? ($/customer, number of customers/day or month, expansion of trade area, product return rate, etc.)

## Section IV: Money

### A. Financial Assumptions

1. Discuss assumptions made to arrive at financial projections – how did you determine your cost of production, pricing, dollars of sales, etc.

2. If seeking funding for your project, discuss how much money you are seeking and what that money will be used for. How will the money be repaid? Do your financial worksheets support this?
3. Discuss your Break Even Analysis.
4. If you are a Start-up, include a Start-up Costs worksheet.
5. Describe where needed fund will be obtained and what all funds will be used for. (i.e., personal contribution of 20% used to acquire equipment, loan for building, etc.)

**B. Bookkeeping, Record-keeping, Accounting System & Process**

1. Ratio Analysis (liquidity, leverage, activity, profitability, growth)
2. Business Financing (personal savings, equity financing - risk & reward, debt financing - can you pay/debt ratio; will you pay/credit score; what if you don't pay/loan to value, other sources of financing)
3. Discuss Factors such as Character, Capacity, Capital, Collateral, Credit, Cash flow, Conditions of the industry, market & economy, Confidence/Commitment.

**C. Financial Worksheets**

1. Start-up or Expansion Costs Worksheet
2. Cash Flow Projections
3. Balance Sheet
4. Profit & Loss Statement
5. Personal Financial Statement
6. Break Even Analysis

## Section V: Milestones & Measures

### A. Goals

1. Where do you want to go? (vision; short & long range strategic objectives/priorities) SMART Goals – Specific Measurable Attainable Rewarding Timed

2. Tactics - How are you are going to get there? (manageable tasks & precise action plans) "*Never confuse motion with action." – Ben Franklin*
3. Data Gathering & Analysis - Track & adjust to progress.
How does performance compare to target measures? What are your key milestones and critical success factors? What "benchmark" information do you need for data-based decisions? Who will measure what/when? Measure what is meaningful.

*"Not everything that counts can be measured and not everything that can be counted counts."*
*– Sign hanging in Einstein's Office at Princeton*

**B. SCENARIO PLANNING**

1. Long View … If/Then - Key crossroads, milestones and other factors that prompt you to continue or modify strategic directions?

**C. AFTER THE PLAN**

1. What do you need to Keep Doing (Preserve), Stop Doing (Destroy/Let Go), Start Doing (Create/Change)?
2. Project Notebook/s, Portfolio, Customer Comments, Recognition & Awards, Mentoring, Continuing Education, Individual & Organizational Development–Time Management, Organizational Skills, Creativity, Communication…

**Section VI: Appendix**

**In appendix, attach any supporting information such as resumes, promotional materials, contracts with customers, etc.**

## Business Models 101

| | Sole proprietor | Partnership | LLC | Corporation | Non-Profit | Co-op |
|---|---|---|---|---|---|---|
| **Ownership** | Individual | Two or more individuals or entities | One or more member individuals | One or more shareholders* | None | User members (individuals or entities) |
| **Business purpose** | Earn a return on owner investment; provide employment | Earn a return on owner investment; provide employment | Earn a return on owner investment; provide employment | Earn a return on owner investment | Provide services or information | Meet member needs; returns on member investment |
| **Membership requirements** | Determined by owner | Determined by partners | Determined by members | Stock purchase. Established in foundational documents. | Membership fee in some cases | Usually stock purchase or fee payment. Established in bylaws. |
| **Major users** | Owner investment, retained profit | Partners' investment, retained profit | Partners' investment, retained profit | Sale of stock, retained profit | Grants, contributions or fees | Membership; retained profit |
| **Voting** | | Partners in proportion to investment or according to agreement | Partners in proportion to investment or according to agreement | One vote per share | | Typically one vote per member |
| **Management** | Owner or hired management | All partners; in a limited partnership, general partner | Partners according to agreement or hired management | Board of directors or hired management | Board of directors or hired management | Hired management |
| **Financing** | Owner investment; retained profit | Partner investment; retained profit | Member investment; retained profit | Stock sales; retained profit | Grants; contributions; fees | Member stock/ shares; investors; retained profit |
| **Benefits/ Profits** | Proprietor | Partners in proportion to investment or by agreement | Members in proportion to investment | Shareholders in proportion to investment | Retained by organization | Members in proportion to use; preferred shareholder returns limited |
| **Taxation** | Proprietor at individual rate | Partners at individual rate | Members at individual rate or elect taxation as corporation | C Corp. on profit at corporate rate and shareholders pay individual rate on capital gains and dividends<br><br>S Corp. shareholders pay individual rate on profit share and capital gains | Typically not applicable because of tax exempt status | Members pay on qualified distributions based on patronage; co-op pays corporate tax rate on non-qualified and unallocated profit, profits from nonmember business, and equity dividends** |

Adapted from "Business Structure Comparison," (2017) University of Wisconsin Center for Cooperatives and Zueli & Cropp (n.d).

### Financing

An important step in the business planning process is financial modeling. The templates in these toolkit models will help entrepreneurs estimate start-up costs, income, and expenses to understand the financial viability of an enterprise. Entrepreneurs should use information specific to their operation to develop accurate projections.

## Capitalizing a Meat Processing Business

| Expenses | Estimated Amount | Source | Notes and assumptions |
|---|---|---|---|
| **Building** | | | |
| Rent or purchase price | _____ | _____ | |
| Modification costs | _____ | _____ | |
| Equipment | _____ | _____ | |
| _____ | _____ | _____ | |
| **Employees (costs prior to start)** | | | |
| Manager wages | _____ | _____ | |
| Employee wages | _____ | _____ | |
| _____ | _____ | _____ | |
| **Other Expenses** | | | |
| Inventory | _____ | _____ | |
| Legal services | _____ | _____ | |
| Accounting services | _____ | _____ | |
| Insurance | _____ | _____ | |
| Consultants | _____ | _____ | |
| Software | _____ | _____ | |
| Interest (prior to start) | _____ | _____ | |
| _____ | _____ | _____ | |
| **Operating Capital** | | | |
| Working capital | _____ | _____ | |
| Over-run allowance | _____ | _____ | |
| **Total** | _____ | | |

## Projecting Income and Expenses for a Meat Processing Business

An important part of the business planning process for start-ups is preparing financial projections to assess the viability of the business. Entrepreneurs can use the following template, designed for a marketing cooperative, to create a simple projected income statement, which can be used for further financial planning.

| | Month of Start-Up | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **Revenue** | | | | | | | | | | |
| Product #1 | | | | | | | | | | |
| Product #2 | | | | | | | | | | |
| - *Cost of Goods* | | | | | | | | | | |
| Cost of Product #1 | | | | | | | | | | |
| Cost of Product #2 | | | | | | | | | | |
| = Gross Margin | | | | | | | | | | |
| + Other Revenue | | | | | | | | | | |
| **= Net Revenue** | | | | | | | | | | |
| **Expenses** | | | | | | | | | | |
| + *Personnel* | | | | | | | | | | |
| Wages | | | | | | | | | | |
| Employee Benefits | | | | | | | | | | |
| Payroll Tax/Worker's Compensation | | | | | | | | | | |
| + *Occupancy* | | | | | | | | | | |
| Rent | | | | | | | | | | |
| Utilities | | | | | | | | | | |
| + *Administrative* | | | | | | | | | | |
| Accounting/Payroll | | | | | | | | | | |
| Internet/Website Expenses | | | | | | | | | | |
| Marketing | | | | | | | | | | |
| + *Operating* | | | | | | | | | | |
| Supplies | | | | | | | | | | |
| Credit Card Fees | | | | | | | | | | |
| Depreciation | | | | | | | | | | |
| Interest | | | | | | | | | | |
| **= Total Expenses** | | | | | | | | | | |
| **Net Income** (Net Revenue-Total Expenses) | | | | | | | | | | |
| | | | | | | | | | | |

## Projecting Income and Expenses for a Meat Processing Business

Discuss the assumptions that were made to arrive at the above financial projections? How were these figures determined?

What are the key measurable “drivers” that will impact the businesses revenue and expenses? (E.g., volume of sales, inventory turns, labor costs, etc.)

## Exploring Capital Sources for Meat Processing Enterprises

*Hannah Scott, Program Manager, CFAES Center for Cooperatives*

Meat processing is a capital-intensive business. Entrepreneurs exploring a new meat processing enterprise or expanding an existing enterprise will want to fully explore financing opportunities as they plan. Like other businesses, entrepreneurs may be able to utilize debt, equity, or specialized gap funding, like specialized loan funds or grants, to build or operate meat processing enterprises.

This bulletin is a guide to help entrepreneurs gather information for their specific operation, business model, geography, and more. Because equity investment strategies are dependent on various factors, from business models to securities laws, they will not be addressed in this bulletin. Entrepreneurs can estimate their capital needs using financial projection tools available at go.osu.edu/meatbizkit.

### Debt Financing

One potential funding source for meat processing enterprises is **debt financing, or loans,** from financial institutions, community banks, credit unions, specialized lenders, or others.

To identify potential lenders, entrepreneurs can reach out directly to financial institutions in their area to understand whether they work with or may work with meat processing businesses. To explore financial institutions in their community, entrepreneurs can also reach out to their local Small Business Development Center, Chamber of Commerce, economic development agency, or other agriculture and food businesses. Examples of debt sources are shared below and are offered for educational purposes only. Listing in this resource is not a referral or endorsement.

- Regional and community banks and credit unions may have agricultural or small business lending portfolios. Entrepreneurs should check directly with lenders to understand eligibility and requirements, loan terms and conditions, and coverage areas.
- Lenders in the Farm Credit System specialize in serving agricultural and rural communities and may lend to businesses like meat processors. Learn more about the Farm Credit System and find institutions from the Farm Credit Administration.
- Community development financial institutions (CDFIs) often focus on community-oriented lending to underserved communities or communities that have not traditionally had sufficient access to financial resources.
- Regional and local economic development agencies or non-governmental organizations may operate loan funds that offer targeted assistance to their community. Funds may be tied to specific development goals, like job creation.
- The federal government provides programs that support small businesses through the U.S. Small Business Administration, the U.S. Department of Agriculture, and other agencies. These resources may take the form of direct loans, loan guarantee programs, cost-sharing programs, and grant programs.
    - A comprehensive listing of the federal programs available to local and regional food system businesses and projects is available from the USDA here.
    - A 2020 overview of assistance for small and very small meat processors from USDA Rural Development is available here.
    - Learn more about SBA loan guarantees here.

| Potential Funding Source | Type | Amount | Notes | For More Information |
|---|---|---|---|---|
| U.S. Department of Agriculture Rural Development Business & Industry Loan Guarantee | Loan Guarantee | In FY 2021, up to 80% loan guarantee. | USDA guarantees loans to small rural businesses through partner lenders. | USDA Business & Industry Loan Guarantees |
| Small Business Administration Loan Guarantee | Loan Guarantee | | SBA guarantees loans to small businesses through partner lenders. | US SBA Loans |
| Appalachian Growth Capital | Loan | Variable | CDFI focused on starting and growing businesses in Appalachian Ohio. | Appalachian Growth Capital |
| Natural Capital Investment Fund | Loan | $5,000 - $750,000 | CDFI focused on small and mid-sized businesses, agricultural enterprises, and nonprofits in Central Appalachia. | Natural Capital Investment Fund |
| Ohio Valley Regional Development Commission (OVRDC) Revolving Loan Fund | Loan | Up to $300,000 | Gap financing for startup or expanding businesses that create jobs in a 12-country region in southern Ohio. | OVRDC Revolving Loan Fund |

Table 1: Examples of sources for debt funding for small businesses in southern Ohio.

**Specialized Funding**

Another potential funding for meat processing enterprises is **nontraditional capital, for example grant awards** from federal and state agencies or other sources. While some grant funds are available for private, for-profit businesses for specific purposes, entrepreneurs should keep in mind that grant funds are generally available to nonprofit or community-based organizations rather than for-profit businesses.

- The federal government, via the U.S. Department of Agriculture, provides grant programs for food and agriculture businesses. A comprehensive listing of the federal programs available to local and regional food system businesses and projects is available from the USDA here.
- In the wake of the coronavirus pandemic, some state governments have created specialized funds for meat processing enterprises. For example, Kentucky's Meat Processing Investment Program (MPIP) overseen by the Kentucky Agricultural Development Board provides grants for expanding meat processing the state.

| Potential Funding Source | Type | Amount | Notes | For More Information |
|---|---|---|---|---|
| U.S. Department of Agriculture Value Added Producer Grant | Grant | In FY 2021, up to $75,000 for planning grants and up to $250,000 for working capital grants. | Grant funds available for up to 50% of project costs for producers, producer groups, farmer co-ops, or majority-controlled producer-based businesses. This program is competitive. | Value Added Producer Grants |
| U.S. Department of Agriculture Local Food Promotion Program | Grant | In FY 2020, up to $100,000 for planning grants and up to $500,000 for project implementation grants. | Grant funds available for up to 75% of project costs for projects that develop, coordinate and expand regional food business enterprises. This program is competitive. | Local Food Promotion Program |
| Kentucky Meat Processing Investment Program | Grant | Four tiers of funding for existing processor expansion or new processing facility development | Available to processors who are or plan to become USDA inspected and process Kentucky beef, dairy, pork, lamb, goat, and poultry products. | Meat Processing Investment Program |

Table 2: Examples of nontraditional funding sources for food and agriculture businesses from state and federal agencies.

**Feasibility Study Example (provided by Mighty Fine Poultry Processing, LLC)**

Entrepreneurs planning for a meat processing business may conduct a detailed analysis to determine if an enterprise is economically feasible. Entrepreneurs may also use a feasibility analysis to help build their business plan. Future processors and others can use the analysis as a model for conducting their own assessment with updated data and information for their own circumstances, or they can use the analysis to check their business planning assumptions.

## FEASIBILITY OF ESTABLISHING A STAND ALONE USDA- CERTIFIED POULTRY PROCESSING FACILITY FOR INDEPENDENT PRODUCERS IN SE MICHIGAN

### INTRODUCTION

In 2014, while trying to purchase prepared chicken to serve at a small farm fundraiser, I learned that locally grown and processed poultry is all but extinct in SE Michigan. At that time I was unable to identify a restaurant able to source locally grown poultry for the making of barbecue chicken, although one venue did offer to utilize a local *distributor*, who would gladly sell him poultry that was grown and processed somewhere else.

I also keep my own flock of a heritage breed of chickens, which I breed in small numbers. I process excess males at Munsell's Poultry Processing, a small but active USDA-certified poultry processing facility. I searched for other USDA processors that, like Munsell's, serve small independent farmers in Michigan, but found none. Since SE Michigan has a population of about 7.5 million people and Munsell's processes about 50,000 birds per year, this means that on average every citizen in SE Michigan is allotted just 0.7% of a single locally grown and USDA-processed chicken per year. No wonder locally grown poultry products in Michigan are so scarce.

While these numbers do not account for poultry processed at USDA facilities run by individual farms, or for poultry processed in non-USDA facilities, it remains clear that the lack of reliable processing is an important barrier to bringing independently grown but USDA-processed poultry to conventional markets in Michigan. Indeed, because Munsell's is the only USDA-certified poultry processor in the state that serves independent producers, it seems that the market for local poultry here is not only small, but also fragile.

Altogether, these events led me to incorporate a new company, Mighty Fine Poultry Processing, LLC, and to apply for funding from the USDA Local Food Promotion Program (LFPP) to determine the feasibility of establishing a new USDA-certified poultry processing facility to serve independent producers in SE Michigan. The goal was certainly not to compete with Munsell's Poultry Processing facility, but rather to increase the amount of locally grown poultry produced and consumed in Michigan by stabilizing options at the processing step.

This report describes the work that was done as part of that USDA-funded feasibility study, which began in October of 2015 and was completed in September of 2016. Briefly, the work of this study included the following:

- Surveys of independent poultry producers to better understand the supply of locally produced poultry, and surveys of distributors to better understand demand for these products in Michigan.
- Identification of potential sites for a new facility, as well as relevant regulations, example building specifications, equipment needs, utility requirements, and waste stream options.
- Input of values identified above into an existing Feasibility Template to calculate feasibility of an effort to establish a new USDA poultry processing facility in Michigan to serve independent producers.
- Creation of this summary report of the work conducted, to benefit other efforts aimed at restoring the production and consumption of locally grown and processed poultry products in the United States.

## THE REGION

Southeast Michigan consists of rural areas where local foods are produced, and populated urban areas where local foods are scarce and highly valued. Despite the ability of the region to produce local poultry and the interest in the population in consuming it, almost no locally produced poultry is actually available in SE Michigan. This is due at least in part to the lack of availability of USDA-certified poultry processers that serve independent producers in Michigan. This project aims to solve that problem by determining the feasibility of establishing a new USDA-certified poultry process facility in SE Michigan, with a goal of increasing both production and consumption of locally produced poultry in Michigan.

## PRODUCER SURVEY

One objective of the proposal was to better understand the current supply of local poultry products in Michigan. This was accomplished by surveying producers across Michigan for information about the poultry produced. Altogether this survey represents an estimated 40,000 birds grown annually by 62 different producers. Perhaps most strikingly, this survey revealed that over 60% of respondents did not access conventional market channels, and instead sold their poultry products primarily to neighbors, family, and friends.

PRODUCER SURVEY SUMMARY

62 respondents raising chickens, turkeys, and other poultry in Michigan

Number of birds raised and processed per year

| | |
|---|---|
| 2,000-5,000: | 3% |
| 500 – 2000: | 23% |
| 100 – 500: | 34% |
| less than 100: | 40% |

Special attributes

| | |
|---|---|
| Free range: | 87% |
| Cage free: | 89% |
| Vegan fed: | 16% |
| Heirloom: | 62% |
| Organic: | 17% |

Products produced “most often” or “sometimes”

| | |
|---|---|
| Whole bird | 92% |
| Breast | 24% |
| Eggs | 82% |
| Other | 34% |

Poultry meats sold primarily at

| | |
|---|---|
| Farmer’s Markets | 34% |
| Wholesale Distributors | 2% |
| Grocery Stores | 5% |
| Restaurants | 2% |
| Institutions | 2% |
| Other | 63% |

| Price of whole processed chicken | |
|---|---|
| Less than $6/lb at Farmer's Market | 35% |

| Price per pound of breast meat |
|---|
| Varies from $6/lb to >$10/lb |

| Where poultry is processed | |
|---|---|
| On the farm | 13% |
| Custom (non USDA) | 34% |
| Michigan USDA processor | 42% |
| Other | 11% |

| Interest in other services "strongly" or "somewhat" interested | |
|---|---|
| Humane Slaughter | 82% |
| Smoked, sausage, or ground meats | 67% |
| Freezer space | 45% |
| Brokering, wholesale, or retail services | 46% |
| Branding or marketing | 46% |
| Discounted feed | 74% |
| Food testing | 59% |

| Interest in producing more poultry if new USDA processor available | |
|---|---|
| Yes | 63% |
| No | 10% |
| Possibly | 27% |

## DISTRIBUTOR SURVEY

This proposal also attempted to determine the current demand for local poultry products in SE Michigan. This was accomplished by surveying grocers, restaurants, and distributors in SE Michigan for the amount of local poultry products purchased and the price. Altogether the results of the survey represent over 150,000 pounds per week in poultry purchases at $1.54 - $3.00 per pound, which are typically sold to consumers at a 90-100% mark-up. Boneless skinless chicken breasts were the primary product purchased. Respondents were able to access little or no Michigan-grown poultry, but all were interested in doing so. Instead, it was discovered that the "local" poultry market for grocers, restaurants, and distributors in SE Michigan is broadly dominated by products from Miller Poultry, which processes nearly 500,000 birds per week at their plant in Orland, Indiana.

## POTENTIAL FACILITY SITES

Four potential facility sites in Washtenaw County were identified and are summarized below.

| Street | Twp/City | Acres | $/Acre | Price | Building | Zoning |
|---|---|---|---|---|---|---|
| Enterprise Dr | Scio Twp | 2.14 | $303,738* | $650,000 | 11,750 sq ft | Industrial |
| Jackson Rd | Scio Twp | 1.13 | $190,265 | $215,000 | NA | Industrial |
| Cherry Hill Rd | Superior Twp | 2.00 | $ 85,000* | $170,000 | Storage | Agricultural |
| Stone School Rd | Ann Arbor | 2.00 | $ 70,000 | $140,000 | NA | Industrial |

* includes building on site

## 1. 170 ENTERPRISE DRIVE, SCIO TOWNSHIP

The property at 170 Enterprise Drive in Scio Township is just west of Ann Arbor within a small established industrial park. The site includes a 11,970 square foot Class C industrial building on 2.15 acres, with 20 parking spaces, 1 loading dock, and 2 grade-level drive-in doors. Overhead piping for water and compressed air has been installed throughout the building. The site is zone I-1 Industrial and is listed at $650,000.


## 2. JACKSON ROAD, SCIO TOWNSHIP

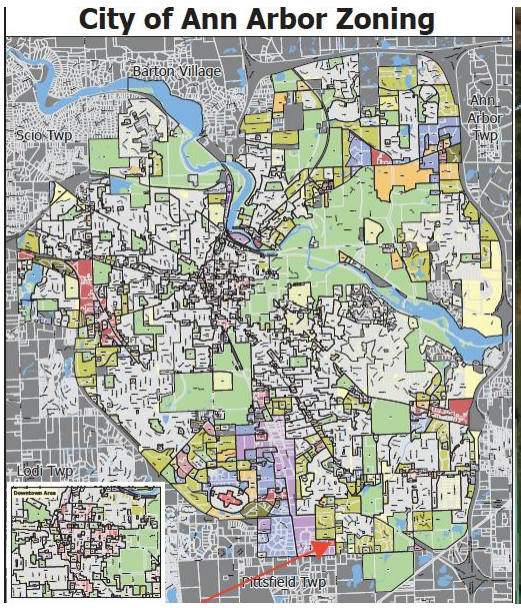
This 1.13 acre property on Jackson Road in Scio Township has easy access to I-94, Tractor Supply, Menard's and Lowe's. The site is zone I-1 Limited Industrial, and is listed at $215,000.

## 3. 10996 CHERRY HILL ROAD, SUPERIOR TOWNSHIP

At the time that this site was originally evaluated, this 2-acre property at 10996 Cherry Hill Road in Superior Township included a small storage building and was listed at $170,000. Since then the building has been demolished, and the property was recently relisted at $95,000. The site is zoned agricultural.


## 4. STONE SCHOOL ROAD, ANN ARBOR

The current parcel at Stone School Road in Ann Arbor is approximately 5.3 acres, and includes a building on the south half of the property. The owner wishes to divide the property, and to sell the ~ 2 acres of open land on the north side of the property at $70,000 per acre.




## FEASIBILITY ANALYSIS

Finally, information gathered was used to calculate the feasibility of this proposed effort, using the Feasibility Template developed at Oklahoma State University (www.agmrc.org/media/cms/feasibilitytemplate_FBBB1058664B5.xls) In particular, the following assumptions were used as Inputs:

- First year processing volume and revenue:
  - 35,000 whole chickens at $4/bird
  - 3,000 cut chickens at an additional $2/bird
  - 4,000 whole turkeys at $9/bird
- Annual growth in processing volume of 5% per year
- Annual payroll costs of $150,000
- Annual supply and miscellaneous costs of $60,000
- Monthly utility costs of $1500
- Total land costs of $140,000
- Total building costs of $476,675, as calculated by Georgia Organics for a facility this size http://sustainagga.caes.uga.edu/documents/PoultryFeasibility2012.pdf p.42-44
- Starting property tax costs of 0.5% or $3683
- Total equipment costs of $120,000

This information was plugged into the feasibility template, with the following result:

**Gross Sales**

| | Year 0 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Whole Chicken | $0 | $140,000 | $147,000 | $154,350 | $162,068 | $170,171 | $178,679 | $187,613 | $196,994 | $206,844 | $217,186 |
| Cut Chicken | $0 | $6,000 | $6,300 | $6,615 | $6,946 | $7,293 | $7,658 | $8,041 | $8,443 | $8,865 | $9,308 |
| Whole Turkeys | $0 | $36,000 | $37,800 | $39,690 | $41,675 | $43,758 | $45,946 | $48,243 | $50,656 | $53,188 | $55,848 |
| **Total** | **$0** | **$182,000** | **$191,100** | **$200,655** | **$210,688** | **$221,222** | **$232,283** | **$243,897** | **$256,092** | **$268,897** | **$282,342** |
| **Expenses** | | | | | | | | | | | |
| Variable | $0 | $176,076 | $178,146 | $180,252 | $182,409 | $184,606 | $186,844 | $189,123 | $191,446 | $193,813 | $196,227 |
| Fixed | $0 | $127,676 | $138,276 | $128,098 | $120,172 | $113,815 | $111,549 | $109,125 | $101,130 | $92,939 | $89,876 |
| Other | $0 | $60,000 | $60,600 | $61,206 | $61,818 | $62,436 | $63,061 | $63,691 | $64,328 | $64,971 | $65,621 |
| **Total Expenses** | **$0** | **$363,752** | **$377,022** | **$369,556** | **$364,399** | **$360,858** | **$361,453** | **$361,939** | **$356,904** | **$351,724** | **$351,725** |
| **Before Tax Profit** | $0 | ($181,752) | ($185,922) | ($168,901) | ($153,711) | ($139,635) | ($129,170) | ($118,042) | ($100,812) | ($82,827) | ($69,383) |
| **Tax** | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| **After Tax Profit** | **$0** | **($181,752)** | **($185,922)** | **($168,901)** | **($153,711)** | **($139,635)** | **($129,170)** | **($118,042)** | **($100,812)** | **($82,827)** | **($69,383)** |

**Estimate of Cash Flows**

| | Year 0 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| After Tax Profits | $ - | $ (181,752) | $ (185,922) | $ (168,901) | $ (153,711) | $ (139,635) | $ (129,170) | $ (118,042) | $ (100,812) | $ (82,827) | $ (69,383) |
| Depreciation | $ - | $ 32,960 | $ 45,200 | $ 36,800 | $ 30,800 | $ 26,528 | $ 26,516 | $ 26,528 | $ 21,164 | $ 15,812 | $ 15,812 |
| Principle | $ - | $ 29,429 | $ 31,474 | $ 33,662 | $ 36,001 | $ 38,503 | $ 41,179 | $ 44,041 | $ 47,102 | $ 50,375 | $ 53,877 |
| **Cash Flow** | **$ -** | **$ (178,220)** | **$ (172,196)** | **$ (165,762)** | **$ (158,912)** | **$ (151,610)** | **$ (143,833)** | **$ (135,554)** | **$ (126,749)** | **$ (117,390)** | **$ (107,447)** |

**(does not consider increases or decreases in working capital loan)**

Altogether these calculations show that given these cost assumptions, this kind of effort to build a small stand-alone poultry processing facility from the ground up is not financially feasible within a 10-year time frame. However, it is important to note that situations in which some part of the infrastructure such as land and building are already in place, or in which more birds can be expected to be processed per year, may be financially feasible.

## CONCLUSIONS

Major conclusions from this study include the following:

1. The Producer Survey demonstrated that over 60% of producers did not sell their products in conventional markets, but instead sold their meat primarily to family, friends and neighbors (p.2).

2. The Distributor Survey demonstrated a very large unmet demand for local poultry by grocers, restaurants, and distributors (p.3).

3. The lack of sales to conventional markets by the majority of producers (Conclusion 1), combined with the large unmet demand for local poultry products (Conclusion 2), suggest a need for improved distribution channels to move locally grown and processed poultry to Michigan markets.

4. The Producer Survey demonstrated that local producers produce whole birds most often (p.3), while the Distributor Survey demonstrated that the greatest demand is for boneless skinless chicken breasts (p.3).

5. The Producer Survey demonstrated that a majority of independent producers are interested in the ability to produce value-added products such as smoked meats, ground meats, and sausage (p.3).

6. The Producer Survey demonstrated that a majority of independent producers would produce more poultry products if more USDA-certified poultry processing options were available (p.3).

7. The Feasibility Analysis demonstrated that a simple stand-alone poultry processing facility aiming to process ~50,000 birds per year is unlikely to be financially feasible within a 10-year time frame (p.6).

Altogether the results of this study show a very high unmet demand for local poultry products in SE Michigan, and strong interest from small independent producers in increasing production to meet that demand if more USDA processing options are made available. On the other hand, this study also shows that establishing a new stand-alone USDA processing facility is unlikely to be financially feasible, if it relies only on processing and a small amount of cutting for its revenue streams.

Meanwhile, this study also points to untapped opportunities to help solve the problem of creating distribution channels to move more locally produced and processed poultry to market. Importantly, solving this problem has the potential to benefit both producers and consumers, and to create additional revenue streams to stabilize the processing business model. Consistent with this view, a second Planning Grant proposal was submitted to the USDA LFPP program in 2016, this time to develop plans for a more complex facility that would not only process poultry for independent producers, but would also aggregate, store, and distribute poultry products to SE Michigan consumers. That work is now ongoing, with a second report expected in 2017.

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