



## **Summary of Major Findings and Recommendations:**

### **Feasibility of a Federally Inspected, Custom Livestock Processing Facility in Tennessee**

October 2017



Harvesting livestock and processing meat into retail cuts are important parts of the food chain that supplies meat from the farm to the consumer. For the past 50 years, Tennessee has been home to a large number of livestock producers and a decreasing number of harvesting and processing facilities. Spurred by strong interest in the past 15 years from consumers desiring to acquire fresh and local meat products, many Tennessee farmers have been capitalizing on the market opportunity to sell meat direct to consumers. Providing local meat to local consumers has caused an increased interest in local livestock

harvesting and meat processing, which has put significant pressure on the relatively few harvesting and processing operations that currently exist in the state.

This trend is not isolated in Tennessee. Observations and a variety of studies indicate interest in smaller, locally oriented livestock harvesting facilities across the country. Therefore, the need for harvesting and processing capacity greater than what is currently available is not a unique burden to Tennessee livestock producers wanting to add value to their operations by direct marketing meat.



Those interested in starting a business modeled in this study should completely evaluate the underlying assumptions and their own situation before moving forward with such a project.



It may seem that the simple solution to the current harvesting and processing dilemma is to open new harvesting and processing facilities. However, there are many barriers to building and developing such businesses from which meat can be sold. First and foremost is the consideration of profitability – just because there is a need for a business doesn't mean that it can operate at a profit. Beyond financial

solvency there are considerations of food safety, worker safety, animal welfare regulations-considerations, waste disposal and an adequate-steady supply of livestock to operate at financial efficiency.

Over the past 15 years an increasing number of livestock producers have been inquiring about the regulatory and financial considerations for operating a federally inspected harvesting and processing facility. Beginning in 2016, a team of UT Extension specialists under the leadership of Dr. David Hughes, embarked on a study to investigate the feasibility of developing a livestock harvesting and processing facility that would operate under federal inspection. The facility modeled in the study would operate on a custom basis to provide the services of animal harvest and meat processing primarily for animal owners who would then be responsible for marketing the meat products.

The analysis conducted for this study indicates that a business operating

under federal inspection and offering custom harvest with basic processing services for Tennessee cattle would be a feasible and profitable venture under the given set of assumptions. However, those interested in starting a business modeled in this study should completely evaluate the underlying assumptions and their own situation before moving forward with such a project.

The entire report for this study is available in UT Extension D series fact sheet "Feasibility of a Federally Inspected, Custom Livestock Processing Facility in Tennessee." The following presents a summary of specific items that are discussed in greater detail in the full report.



## FINANCIAL FEASIBILITY:

A well-managed facility processing 1,600 head of cattle each year would be a profitable venture with an annual estimated pre-tax profit of \$80,049 based on projected annual revenues of \$752,400 and annual costs of \$672,351 (including \$306,599 in labor costs). Facility construction and equipment costs (\$750,345) would be paid off in 10 years.

## STEADY SUPPLY OF CATTLE:

Sufficient and steady demand by farmers is an important consideration because small processing plants must procure a certain volume that is spread out somewhat evenly over the year to cover bills when due and properly utilize workers. Other research has indicated a high level of potential interest by Tennessee beef cattle producers in supplying livestock to an in-state federally inspected harvesting facility. But anyone considering a new operation must consider their probable regional supply, including the degree of farmer commitment, the ability to self-supply, farmers' willingness to transport, and the location of competitors.

## OFFAL (DROP) DISPOSAL:

Offal is non-meat byproducts. Unlike larger harvesting operations where offal is an income stream, its disposal is an expense for smaller operations. The cost associated with offal disposal can occur through rendering, composting, landfill or incineration. Although finding a rendering company and negotiating the details involved with pickup of the byproducts can be problematic, our study assumes that offal is handled by a third-party rendering business. The rendering company would pick up the offal at the harvesting facility and would be responsible for converting them into marketable products. Any new harvesting facility must have a plan in place for proper offal disposal and must account for all disposal costs.

## WASTEWATER DISPOSAL:

Livestock harvesting and meat processing facilities generate a significant amount of wastewater that contains various types of effluents. Such wastewater must be properly treated before it is discharged. Facilities that treat wastewater must meet federal and state environmental regulations. The most accessible tactic for treatment of wastewater generated by a livestock harvesting facility is treatment by a municipality (as assumed in our study).

## ANIMAL WELFARE:

Commitment to humane treatment of the animals is very important. Livestock must be rendered unconscious by a single blow or gunshot or an electrical, chemical, or other rapid and effective means (i.e., accurately inducing immediate unconsciousness). Incomplete stunning can cause bone fractures and bloodspots in the meat and lead to legal action with plant closings or other penalties. Regulations mandate animals be driven at a normal walking speed and any driving devices cannot injure or cause unnecessary pain. We assume a mechanical captive bolt application conducted by a well-trained and experienced operator.

## WORKER WELFARE:


The meat packing industry can pose safety and health hazards. Regulations require common hazard control measures including implementing an effective ergonomics program and providing ready and easy access to building exits.

## FOOD SAFETY:

Adherence to food safety and sanitation is arguably the most important factor in harvest facility maintenance. Processing plants have a duty to provide sanitized facilities, first with construction and then with the maintenance of proper protocols by using appropriate equipment and properly training workers. While regulations are daunting, significant assistance is provided by the UT Department of Food Science and the Tennessee Department of Agriculture.

A high level of potential interest by Tennessee beef cattle producers in supplying livestock to an in-state federally inspected harvesting facility.





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