Description of the Mobile Slaughter Unit Analytical Tool:

This interactive feasibility analysis tool helps determine revenue and costs of operating a mobile slaughtering unit (MSU) for different types and quantities of animals. This particular MSU is based on the unit created by Joel Huesby of Thundering Hooves. It can process a maximum of 2 cattle, 4 pigs, or 6 sheep per hour. The MSU can be actively processing animals for 7 hours per day, as one hour per day is needed for set-up and USDA paperwork.

Following the instructions in the Summary tab of the worksheet, the user will enter the number of kill days per week and how many animals will be slaughtered by species. If the number of animals is too high, the orange cell says "too many animals." If the number of animals is within the feasible range, it says "within allowable limits." When the number of animals is within allowable limits, producers can then view value-added revenue from the MSU by animal, by kill day, per week, and per year. They can then play with these numbers and see how different choices affect the revenue numbers.

The Value-Added by Species tab of the worksheet determines potential daily revenue by species, given assumptions on carcass yields, average retail selling price, average wholesale buying price (or selling price, if the operator also owns the animals), and average weights by species.

The Enterprise Budget tab of the worksheet determines annual costs of realizing this value-added revenue. Gross returns, listed at the top of the worksheet, are determined based on the quantity of animals that will be butchered as entered in the Summary tab. Under Operating Inputs, the first section lists the purchase cost of the animals, which is carried over from the Wholesale Price section of the Value-Added by Species tab. Labor costs are determined by multiplying the hourly wage rate by 8 hours per day for each day of operation per week, then multiplying by 50 weeks per year of operation. Butchers are paid $25 per hour and assistant butchers are paid $15 per hour. The USDA inspector receives $55 per hour for any overtime work, which is assumed to be 20 hours per year for each multiple of days per week of operation. The imbedded numbers in these formulae can be changed in the spreadsheet. For example, if the wage rate increases to $60 per hour for the inspector, in cell G22 the number 55 in the formula should be replaced with 60.

In the Enterprise Budget tab of the worksheet, costs for supplies and utilities are determined based on days of operation per year and costs per day. Other costs include cut and wrap fees of $0.65 per lb, smoking charges for 1/3 of each pork carcass of $1.25 per lb, and a freezer storage fee of $0.10 per lb processed per year. Fuel for driving the tandem axle truck from the kill facilities to the processing facilities are based on an assumption of 12 gallons per roundtrip. This assumption can be altered by editing the formula in cell C35. Lubricant costs are determined based on a standard assumption that fuel comprises 85% of the total fuel and lubricant costs, thus multiplying fuel costs by 17.65% provides an estimate of lubricant costs. Machinery repairs are estimated at $60 per day of operation. Labor for the truck driver is estimated at $20 per day of operation, as the total driving time is approximately an hour and this employee is also working elsewhere. A management fee of $100 per day of operation is also charged to the MSU. Operating costs include an interest fee of 7% against total operating costs plus an overhead fee of 5% of total operating costs. While operating capital may be only partially

borrowed, this interest fee is assessed against the total, as it includes the opportunity cost of providing operating capital whether or not it is actually borrowed. Overhead costs include phone, legal, and accounting fees.

The next section of the Enterprise Budget tab details ownership costs for the enterprise. Depreciation and loan payments are determined in the next tab and transferred into this section. The fully outfitted MSU is assumed to cost $250,000. This price includes all of the necessary tools and supplies to start processing meat. A used tandem axle truck was assumed to cost $20,000 while the holding/kill facility would cost $10,000 to build. The annual payment and depreciation details are outlined in the Loan and Depreciation tab of the worksheet. Any of the values in white cells can be changed, including the initial cost, the payment period (number of years), and the interest rate for the loan payment calculation, and the initial cost, salvage value, and length of life in years for the straight-line depreciation calculation.

Net revenue for the MSU is determined by subtracting the total costs per year from the Enterprise Budget tab from the annual revenue. Annual revenue is calculated based on information entered in the Summary tab that is then multiplied by the value-added data calculated in the Value-Added by Species tab. These estimated returns are contingent on price and cost data throughout the spreadsheet. They represent a best-case scenario with all products selling for a premium price. All value-added products will need to be marketed as such in order to achieve these types of returns.