

Mobile Poultry for Meat Planning Budget

Producing poultry for meat in mobile houses, or “chicken tractors,” is an innovative solution to pasturing poultry. These lightweight, portable structures provide the birds with access to commercial feed and water as well as the ground, forages and insects, while keeping them protected from predators and the weather. Pasture-raised poultry also fertilize the soil and help control harmful insect populations while being continuously rotated to new habitat to minimize buildup of harmful pathogens.

Basics of mobile poultry

Chicken tractors come in many shapes and sizes. Entry-level chicken tractors can be easily built on the farm (Figure 1). Larger, commercially built models can house several hundred birds and may include automatic feeding, watering, lighting and doors. There is a trade-off between capital and labor needed in the mobile poultry business, and success depends on identifying the right balance.

A well-designed chicken tractor is lightweight, portable, and equipped with a solid roof for shade and shelter and perforated sides for airflow. Tractors used for meat-bird production are not suitable for winter housing, so halting production during the coldest months in seasonal climates is recommended. Growth rates will decline during the hottest months.

Managing broilers in chicken tractors is like standard small-scale production, with daily feeding, watering and relocation of the tractor. Moving the tractor at least once per day is generally considered the minimum for optimal pasture management. Some producers move the tractor twice a day for better forage health preservation and more effective manure distribution. The amount of time needed for daily chores varies, but in all cases maximum efficiency should be pursued to minimize labor costs.

Written by:

Drew Kientzy, Senior Research Analyst, Agriculture Business and Policy
Jennifer Lutes, Field Specialist, Agriculture Business and Policy
Tatijana Fisher, State Extension Specialist, Lincoln University

Find poultry budgets and numerous others on MU Extension's [Missouri crop and livestock enterprise budgets webpage](#).



Figure 1. Raising broilers in small, homebuilt tractors can reduce upfront investment and adding additional tractors to the operation improves labor efficiency.

The compartmentalization of chicken tractors allows for easy expansion. Daily chores, equipment and facility needs for multiple tractors are like those for a single tractor, so scaling up can increase revenue potential without proportionally adding expenses.

Regulatory concerns

Pasture-based poultry operations are generally exempt from confined animal feeding operation (CAFO) environmental regulations and licensing; however, please check with Missouri Department of Natural Resources for any updated information. The U.S. Department of Agriculture Food Safety and Inspection Service is the federal regulatory agency responsible for meat and poultry food safety, and it works in partnership with the Missouri Meat and Poultry Inspection Program (MPIP). These agencies work together to ensure meat and poultry food products are safe for consumers by inspecting slaughter and processing operations in addition to facilities. All poultry meat products sold to consumers need to be inspected or be exempted from inspection. For more information about inspection exemptions for poultry operations, visit the [MPIP Exemption Qualifications webpage](#).¹ In addition, refer to MU Extension publication G852, [Missouri Slaughter and Inspection Requirements for Livestock and Poultry Producers](#),² a quick-reference guide to connect producers to the appropriate regulatory agency.

Table 1. Facility investment used in mobile broiler budget, in dollars.

Item	Small-scale (100 broilers)		Medium-scale (700 broilers)	
	Initial investment	Annual cost	Initial investment	Annual cost
Mobile house	657	105	27,000	2,700
ATV ¹	3,000	390	10,875	1,196
Brooder house	642	87	15,345	1,412
Feed bin			4,300	387
Water trailer			3,000	320
Feed trailer			3,500	385
Livestock trailer ²			1,950	215
Transport crates	420	39	2,880	307
Total	4,719	621	68,850	6,922

1. 50% allocation of a \$6,000 all terrain vehicle (ATV) for the small-scale budget; 75% allocation of a \$14,500 utility task vehicle (UTV) for the medium-scale budget.

2. 25% allocation of a 7-foot-by-14-foot livestock trailer valued at \$7,800.

Table 2. Labor requirement in mobile broiler budget, in hours per week.

Activity	Small-scale (100 broilers)	Medium-scale (700 broilers)
Feeding and watering	1.0	2.0
Moving chicken tractor	1.0	2.0
Brooder operation	1.3	2.5
Broiler processing	4.0	10
Other production tasks	1.0	3.0
Administration and management	0.5	1.0
Total labor requirement	8.8	20.5

Pastured broiler production system

This guide details broiler production with two chicken tractor sizes. The first is a small, home-built tractor housing 100 broilers, constructed of wood, plastic sheeting and poultry net wire. The second is a large, commercially fabricated mobile house, purchased from a specialty fabricator, holding 700 broilers. In the larger system, greater investment is required but labor needs are reduced. In either case, it is estimated that Cornish Cross broilers are raised for four weeks in the brooder and then transferred to the chicken tractor for another four weeks before being processed on the farm. When processed at 8 weeks of age, the broilers weigh 6.5 pounds and dress out at 70% of live weight. With a 36-week operating window for the chicken tractor, seven batches of broilers, or “turns,” are raised annually. Table 1 details the approximate investment and equipment required

for each size operation, and Table 2 estimates weekly labor needs. Use the [Mobile Poultry Budget workbook \(XLSX\)](#)³ to customize the assumptions in this guide to fit your plans or existing operation.

Large-scale poultry producers that supply conventional food systems are highly specialized and efficient. Mobile and pasture-based systems cannot compete based on efficiency and must rely on direct-to-consumer sales of premium-priced whole carcasses by the pound. This system requires additional marketing costs and effort, but value-added sales significantly increase revenue compared to wholesaling live birds. Table 3 summarizes projected costs and returns for raising broilers in chicken tractors and selling processed whole carcasses direct-to-consumer.

Key expenses include feed, chicks, labor and processing; Table 4 lists basic costs and quantity requirements for these expenses. Enterprises using roughly 1 ton or more of feed per month can save by purchasing bulk custom-mixed feed from a local feed mill. Finding healthy chicks at a good price is essential for staying on schedule, as is timely processing. Custom processors can help reduce labor and capital needs but add operating expenses to the bottom line. Producers handling processing in-house must find equipment suited to their scale, facilities and available labor.

On-farm processing

Securing poultry processing services is a major challenge for producers statewide. Where custom processing is available, it lessens fixed costs but can increase the variable cost per pound of meat. On-farm processing requires more labor and initial investment

Table 3. Costs and returns to mobile broiler enterprise, in dollars.

Item	Small-scale (100 broilers)		Medium-scale (700 broilers)	
	Annual total	Per turn	Annual total	Per turn
Income				
Processed whole carcasses sold	12,103.00	1,729.00	84,721.00	12,103.00
Operating cost				
Feed	3,553.00	507.57	14,292.50	2,041.79
Labor	4,299.75	614.25	9,828.00	1,404.00
Purchased chicks	2,170.00	310.00	15,190.00	2,170.00
Brooder operation	1,647.80	235.40	4,655.00	665.00
Broiler processing	2,846.90	406.70	16,241.00	2,320.14
Transportation	225.00	32.14	900.00	128.57
Marketing	1,210.30	172.90	8,472.10	1,210.30
Maintenance, fuel and utilities	821.96	117.42	4,266.76	609.54
Inspections and licensing	100.00	14.29	100.00	14.29
Operating interest	253.12	36.16	1,109.18	158.45
Total operating cost	17,127.83	2,446.83	75,054.54	10,722.08
Ownership cost				
Land use charge	100.00	14.29	450.00	64.29
Facility and equipment ownership	932.71	133.24	8,039.47	1,148.50
Taxes and insurance	605.15	86.45	4,236.05	605.15
Total ownership cost	1,637.86	233.98	12,725.52	1,817.93
Total cost	18,765.69	2,259.68	87,780.06	12,540.01
Income over operating cost	−5,024.83	−303.27	9,666.46	1,380.92
Income over total cost	−6,662.69	−530.68	−3,059.06	−437.01
Return to labor and investment	−1,430.23	−185.86	14,808.41	2,115.49
Breakeven chicken price per pound, less labor and facility cost	4.47		3.30	
Breakeven chicken price per pound	6.20		4.14	

but offers lower operating costs, making it attractive for many producers. However, on-farm processing is still regulated by Missouri's Meat and Poultry Inspection Program (MPIP), and sales may be restricted to certain markets. Annual production quantities are limited by the type of inspection exemption the facility operates under. Keep in mind that as the business scales larger, there may be different regulatory processes it must adhere to. For example, if the business expands beyond the poultry processing exemption numbers, bird-by-bird inspection may be required, which might necessitate significant investment in processing facilities and equipment. Your MPIP agent and other contacts within the Missouri Department of Agriculture can provide more information on what rules and regulations apply to your

operation. MU Extension publication G852, [Missouri Slaughter and Inspection Requirements for Livestock and Poultry Producers](#),² summarizes information on inspection requirements for meat and poultry processing facilities.

Marketing broilers direct-to-consumer

Before selling poultry, it is important to understand your target market and how you'll reach potential buyers. MU Extension's [Intel for Ag Market Intelligence platform](#)⁴ can help you assess local demand and consumer preferences to guide your strategy. Once you understand your market, choose a market channel that fits your capacity and goals. Market channels can

Table 4. Input assumptions in mobile broiler budget.

Activity	Unit	Cost per unit	Small-scale (100 broilers)	Medium-scale (700 broilers)
Whole carcass sales	per pound	4.00	3,026.00	21,180.00
Starter feed	50-pound bags	15.00	27.00	185.00
Bagged feed	50-pound bags	17.00	182.00	
Bulk feed	tons	350.00		31.90
Labor	hours	19.50	220.50	504.00
Day old chicks	each	3.10	700.00	4,900.00
Transportation	miles	0.90	250.00	1,000.00
On-farm processing	per broiler	4.27 / 4.07	665.00	3,990.00
Land expenses	per acre	50.00	2.00	9.00
Interest rate	annual percentage rate	8%	14,730.98	66,827.56
Taxes	percent of revenue	3%	12,103.00	84,721.00
Marketing expenses	percent of revenue	10%	12,103.00	84,721.00

include farmers markets, on-farm stands, Community Supported Agriculture (CSA) partnerships, local retailers or restaurants, or home delivery or subscription services. To better understand the potential costs associated with these and other market channels, refer to MU Extension publication G647, [Refining Market Channel Selections Based on Cost](#).⁵

Take note of your ability to differentiate your product. Use creative, durable packaging and clear messaging to share what makes your product special, including any unique production practices or heritage breeds. Sellers should also be prepared to engage with customers and share their farm's story. Appealing packaging and strong storytelling skills will help you connect with customers. To build customer relationships and boost sales, invest time and effort in marketing through social media, flyers and other avenues. To learn more about establishing an online presence and leveraging social media, refer to MU Extension publication G6225, [Post, Engage, Grow: A Social Media Primer](#),⁶ and to learn how to use social media for sales success, refer to MU Extension publication G6229, [Harnessing Social Media to Drive Sales](#).⁷

Conclusion

With proper management, mobile chicken tractor poultry production can be profitable. Key practices include optimizing labor efficiency, securing quality

markets, minimizing facility and equipment ownership costs, and reducing product waste. The [Mobile Poultry Budget workbook \(XLSX\)](#)³ models heritage breed turkey production at small and medium scales alongside the broiler budget presented in this guide. If you are interested in egg production with a pasture-based system, refer to MU Extension publication G741, [Mobile Laying Hen Planning Budget](#)⁸ and its accompanying workbook.

Web addresses

1. agriculture.mo.gov/animals/health/inspections/exemption.html
2. extension.missouri.edu/publications/g852
3. extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/mobile-poultry-budget.xlsx
4. intelforag.org/market-intelligence
5. extension.missouri.edu/publications/g647
6. extension.missouri.edu/publications/g6225
7. extension.missouri.edu/publications/g6229
8. extension.missouri.edu/publications/g741

This work is supported by the U.S. Department of Agriculture's (USDA) Farm Service Agency through project award number FSA23CPT0012862. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the USDA.

Additional contributors: Eric Meusch and Heather Conrow, field specialists in animal health and production, and TaylorAnn Washburn, state specialist in agriculture business and policy.