Transfarmation®

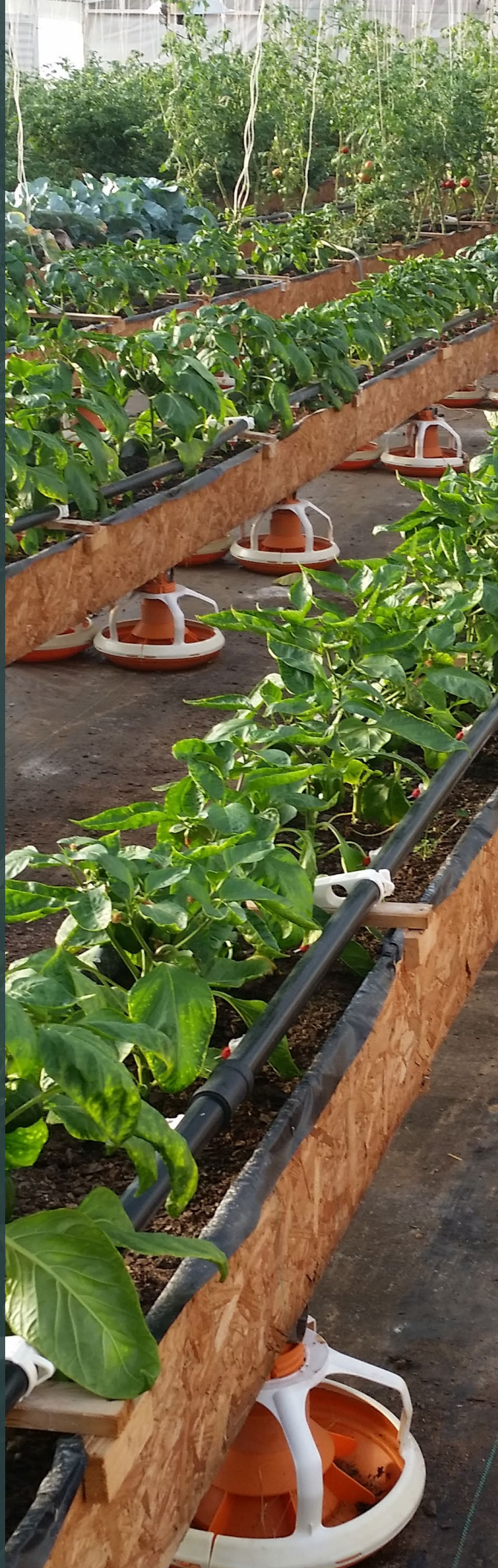
Transfarmation to Sustainable Foods

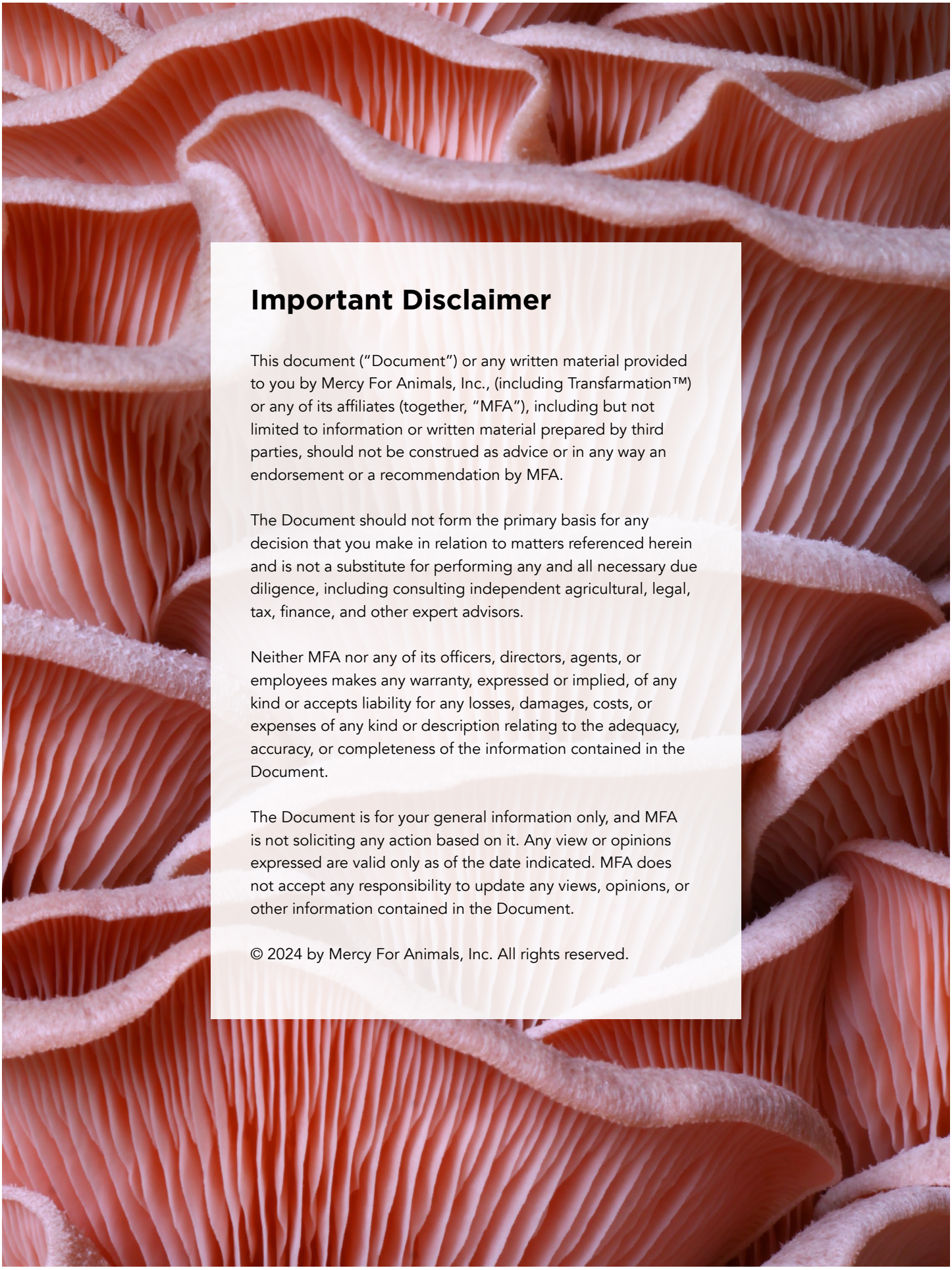
GRANT REPORT

Reporting Period: December 2022–June 2023
Amount Granted: $10,000
Farm Location: Gilmer County, Georgia
Former Farm Type: Broiler
Farming Method Tested: Specialty-mushroom cultivation inside a greenhouse structure
Recommended for Other Farmers? Yes
Biggest Learning: When farmers have done preparation work to identify buyers and set prices, bringing a mushroom operation online can be very quick.
Conversion Plans (not used): Multiroom Floor Plan 1, Multiroom Floor Plan 2

Note: Names are omitted from this report to protect the farmer, who is still under an active contract.

A Bo Halley Research and Innovation Grant totaling $10,000 was awarded to an active poultry farmer for the project Transfarmation to Sustainable Foods. This farm family has been raising birds on their family's land for the past 46 years, but the transition from working within a farmer cooperative to raising chickens under contract for a corporate entity motivated them to seek alternatives that would enable them to keep their farmland. They cited a decline in chicken quality, farmer treatment, and ability to make a profit as reasons for pursuing a farm transition. Their vision for this project was to transition their commercial poultry farm into a sustainable plant-based farm, starting with oyster mushrooms and scaling to include a "pick-your-own" or an agritourism model for seasonal produce.





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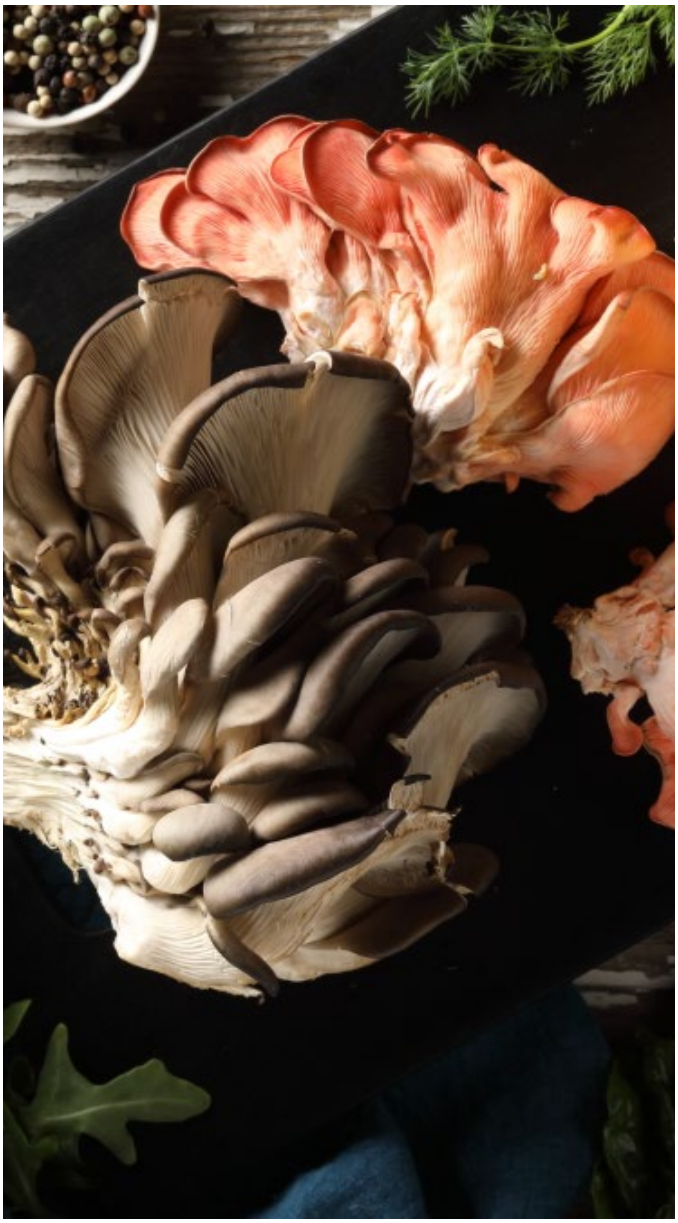
Stages of Transition

In their grant application, the farmers stated that their first stage involved research to determine whether mushrooms, greens, and seasonal vegetables would be a viable option for their transition. Their interest followed a farm injury that left them without enough labor to address the number of chickens dying daily at their farm. They recognized the need to transition to an operation with safer, better working conditions. They sought information through their local USDA and county extensions and state department of agriculture, which helped them determine that they did not need any special licensing to grow mushrooms in their state and that cost-sharing was available for prospective organic farms. To begin mushroom farming, they studied YouTube videos and other internet resources.

Progress made in the third quarter included demolishing the old framing that was no longer viable and beginning construction on the new framing for the greenhouse section.

From there, they began creating and pasteurizing their own substrate in two leftover grow boxes they had purchased. The substrate used was wheat straw and coffee grounds they sourced for free from Starbucks. This enabled them to make five eight-pound bags of colonized mycelium.

Their next stage was experimentation. The couple began growing mushrooms in a 5' x 5' grow tent in their garage. They equipped the tent with a carbon-dioxide exhaust fan with temperature and humidity control and a humidifier. At this stage they had not sold any mushrooms but were able to successfully harvest enough for themselves, friends, and family. They started sharing educational resources, recipes, and websites. At the time of their application submission, they had grown and produced more than 20 pounds of oyster mushrooms from the leftover mycelium of two grow boxes.



After receiving the grant, they experimented in the first quarter and started producing and selling lion's mane mushrooms. They worked on phasing growth so they could consistently offer mushrooms for sale.

Project-Related Tasks

In the first quarter, their daily tasks included monitoring mushroom temperatures, humidity, fresh air, and CO_2 levels for growth; marketing mushrooms using social media; and harvesting and selling mushrooms. In the second quarter, day-to-day tasks included manually managing the fruiting-chamber environment, harvesting, rotating "spent" blocks, preparing and placing new blocks in the fruiting chamber, updating social media, weighing mushrooms, selling at their public meeting spot, and making local deliveries. Weekly tasks included cleaning the fruiting chamber, printing labels and informative brochures, and researching marketing strategies and value-added production. Monthly tasks included budgeting and mushroom-block pickup and transport. Another important task mentioned was meeting a business owner with experience in plant care and maintenance to learn about greenhouse operations for their farm.

Table 1. Hours per week spent on growing and selling lion's mane mushrooms

Task	Time
Production	10 hours
Marketing	3 hours
Transportation	2 hours
Management and accounting	5 hours
Total	20 hours

By refining their small-scale production in the second quarter, they consistently had fresh mushrooms in stock, which was a challenge in the beginning. They reported improvements to managing their fruiting chamber. They also purchased two different humidifiers, built shelving in the fruiting chamber to hold more blocks, and said they had cold storage for harvested mushrooms. They began selling grow blocks and mushroom compost.

At the six-month mark, they had grown 155 pounds of lion's mane mushrooms, selling 120 pounds of that yield at $20 per pound directly to customers they met through Facebook Marketplace. They had 10 blocks fruiting a week, with a yield of five pounds of mushrooms each week.

Unexpected Challenges and Lessons Learned

In the first quarter, they experienced challenges with monitoring mushroom growth and learning to grow lion's mane mushrooms instead of oyster mushrooms. They found lion's mane more marketable than other gourmet mushrooms, selling at $20 per pound. Another challenge they found was working to phase growth for a consistent supply of fresh product. In the second quarter, they reported that one of them was receiving ongoing medical treatment for a serious health issue. They've learned that transitioning a commercial poultry farm requires diligence, constant engagement, patience, and determination. They had high hopes for selling in a thriving market for specialty mushrooms but did not explore avenues beyond Facebook Marketplace and were ultimately prevented from doing so due to health issues. They recommend having support in place through all stages of transitioning, as well as a plan B in case plan A doesn't manifest success fast enough. They strongly advise researching all areas and avenues of transitioning.

Was the funding sufficient for the project?

Undetermined at this time. The proposed budget from the grant application included a Mycodo-controlled cultivation chamber for $10,000 from **MycoLogic**.

Table 2. Proposed budget

Materials	**Cost**
One 10' x 20' Mycodo-controlled cultivation chamber	$10,000
Operating costs	
200 blocks per month at $12 for 4 months	$9,600
Packaging materials (for fresh-market sales)	$240
Utilities	$148.48
Total materials and operating cost	**$19,988.48**
Estimated revenue (4 months, assuming 200 blocks per month yielding 2.6–2.75 pounds each with 10% wastage)	$20,000

Table 3. Actual budget

Infrastructure materials	$10,043.86
Sales materials	$163.98
Production materials	$1,280.22
Total	**$11,488.06**

What would the farmer have done differently?

They wished they'd had better knowledge of realistic transition expectations. They anticipated a learning curve and stated they were willing to learn from the process.

Time Frame

They desired more examples of farm transitions to set realistic expectations, including time frames.

Farmer Achievements

They are proud that they are growing and selling lion's mane mushrooms. They're proud of their fruiting-chamber management, which has enabled them to always have fresh product in stock. They've been quick to respond to social media inquiries and able to accommodate and educate customers.

Note that we have no data from the third and fourth quarters for this report due to an ongoing health emergency for the family, which has put this project on hold.