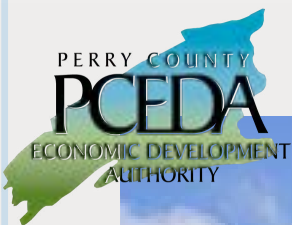


# A Regional Strategic Plan for<sup>8</sup> the Agricultural Economy

Top Business Opportunities  
to Drive Economic Growth  
in Perry County, Pennsylvania



Report by: Kitchen Table Consultants

In Collaboration with:  
Perry County Economic Development Authority

**2020**

3	<b>Acknowledgments</b>
4	<b>Important Note to the Reader: Do NOT <u>only</u> read this report</b>
5	<b>Executive Summary</b>
5	What We Did
5-6	What We Found
7	What You Need to Do
8	<b>Introduction</b>
8	A Different Kind of Agricultural Plan
8	Collaboration and Engagement
10	A Bias Toward Action
10-11	What Does Success Look Like for this Project?
11	Perry County Agricultural Performance Dashboard
12	Key Agricultural Planning Recommendations
12	Further Business Planning and Continued Regional Support will be Required
13-14	<b>Research Methodologies</b>
15	<b>The Top Three Opportunities for Perry County: Mini Business Plans</b>
15	Preface
15-23	Grain Hub Mini Business Plan
24-32	Hemp Processing Facility Mini Business Plan
33-39	Malt House Mini Business Plan
40	<b>Six Other Potential Opportunities for Perry County</b>
40-45	Second Tier Opportunities
45-48	Third Tier Opportunities
50	<b>Appendices</b>
50-51	A. Perry County's Agricultural Assets and Needs: Agricultural Reports Summary
51	B. Interviewing Farmers
52-53	C. SWOT Analysis with Agricultural Committee
52-61	D. Surveying Farmers
61-66	E. Local Food Infrastructure
66-67	F. Pennsylvania Local Food Consumer Trends
67-79	G. The Process of Uncovering and Assessing Agricultural Opportunities
80	H. About Kitchen Table Consultants

# Acknowledgments

We would like to sincerely thank the following individuals and organizations for their support of this project:

## **Agricultural Committee**

Donny Bartch, Merrimart Farms

Will Brownback, Spiral Path Farm

Pete and Heather Brummer, Brummer's Happy Breeze Farm

Jim Fuller, PCEDA and President of Perry County Farm Bureau

Duane Hertzler, PCEDA Board Member

Dave McLaughlin, Little Germany Farms

Brooks Miller, North Mountain Pastures

Bill Roberts, Perry County Land & Cattle

Jeff Trout, Trout Farms and Bootleg Creamery

Shawna Weller, Weller's Dairy



Dylan Baird, Philly Food Works

Ron Barchet, Victory Brewing

Gary Bellis, Bread of Life Outreach, Pastor

Judy Chambers, Penn State Extension

Stephen Christensen, VP & General Manager, Canadian Greenfield Technologies Corp.

Ashlee Dugan, PASA

Jason Finnerty, Tri-County Planning Commission

Taylor Groff, Groff North America

Ron Moule, Hemp Expert

Ryan Neuhard, Newport School District

Richard Pluta, Perry County Chamber of Commerce, President

Katherine Rapin, Lost Bread

Mike Schroth, Stone Path Malt

Bob Welsh, INTAG Systems

Greg Wirth, Perry County Area Agency on Aging

Jay Young, Rising Spring Meat Company

Pennsylvania Association for Sustainable Agriculture (PASA)

USDA Agricultural Marketing Services, Local Foods Promotion Program

Dear Reader,

4

## DO NOT ONLY READ THIS REPORT

This is not your typical academic report. It's the culmination of over a year of stakeholder engagement and research, and was built to have a significant impact on the agricultural economy and the lives of farmers in Perry County, PA. It will be a waste of time and precious federal funds if ignored and not taken seriously. Farmers, entrepreneurs, planners, investors, bankers, and political leaders - it's time to engage, to collaborate, and problem-solve. It's time to lift the opportunities outlined in this report off these pages and into the real world.

Perry County farmers must think about how they can be most viable in the next ten years. The economic development community must continue to find funding that will allow the County to maintain the momentum this project has built. The farmers are dedicated and committed to finding ways for their land to be more productive, and their farms even more profitable and viable for many years to come.

This project was funded through a federal planning grant, which is often followed by an implementation grant of up to \$500,000. This type of implementation grant could be used to launch a strategic education and marketing campaign to pitch one (or more) of these top opportunities to willing entrepreneurs/investors. The LFPP (Local Food Promotions Program) Implementation grant funds may also be used to assist entrepreneurs with various business needs. This type of seed funding should be used to incentivize entrepreneurs to invest their time, money and energy into Perry County.

With the right people at the wheel and the continued support of the agricultural and economic development community, we strongly believe that Perry County can achieve its goals of building the local agricultural economy in a lasting and significant way.

Thank you for taking the time to read this report, but please do not merely READ it. Engage with it. Ask questions. Send feedback. Go find the entrepreneurs that will deliver on these plans and support them through that endeavor.

Thank you for your participation,

*Kitchen Table Consultants*

## What We Did

We began with a broad assessment of the county's strengths, weaknesses, and unique assets that could be leveraged. Along the way, we developed a running list of possible opportunities that could be pursued further and vetted. Ultimately, we were seeking agricultural-related programs and facilities that would be most likely to be viable in Perry County and that were likely to have a significant positive impact on the region's agricultural economy. In collaboration with the County, we went through a rigorous process of narrowing down the opportunities.

As a group of entrepreneurs ourselves, Kitchen Table Consultants approaches this work with an explicit bias towards action and execution. We know from experience that nothing happens without the right people involved to make it happen. For this reason, throughout our research, we kept an eye on finding entrepreneurial owners who could potentially be involved. The underlying goal behind all of the business opportunities in this plan is to grow the agricultural economy in Perry County. Our approach in this project was to survey the agricultural landscape in Perry County, understand the county's strategic strengths, and develop and begin to vet a set of opportunities that were most likely to be viable, appropriate, and impactful on the region's agricultural economy.

## What We Found

The top three opportunities identified in this project are a Malt House, a Grain Hub, and a Hemp Processing facility. All three of the following business concepts have the potential to be viable in Perry County and create a significant impact on the agricultural economy in Perry County, in terms of gross sales, job creation, farmland viability, and tax revenue for the County.

**In order to implement, the top three opportunities will all require further business planning, site assessments, market assessments, county and state support, and a deep collaboration with an entrepreneur who would become the full or partial owner of each respective business.**

**A local grain hub** that buys grain from Perry County farmers, stores the grain and sells it to malt houses, distilleries, bakeries, and food supply groups. The planned grain hub would ultimately have the capacity to store at least 500,000 bushels or 25 million pounds of grain, but would be constructed in a modular way allowing for expanded capacity as grain supply, market demand and the customer base increase over time.

**A hemp processing facility** that intakes raw hemp and processes it into three main categories of shelf-stable materials: bast fiber, hurd, and green microfiber. These materials could be sold for a wide variety of uses. Access to processing would support the development of more hemp farming and the creation of a regional secondary hemp-related industries. Any grain farmer in Perry County could theoretically produce hemp with standard farm equipment.

**A malt house** that would produce and supply locally crafted base and specialty malt to the craft brewing industry using innovative and scalable process technology. Perry County malt will enable craft brewers (in and beyond PA) to create distinctive beers, enhance their local branding, and achieve further growth in an expanding and competitive marketplace.



**The process also revealed six additional opportunities that were seriously considered and may still have potential in Perry County:**

1. Regional Local Food eCommerce Company
2. Value-Added Meat Processor
3. Dairy Processing Facility - Value-Added Products
4. Support Existing Initiatives to Create a Local Farmers' Market
5. Services to help farms with business planning, succession planning, profitability planning, and marketing
6. Education programs in schools to get next-generation excited about Agriculture

## **We recommend that PCEDA EXECUTIVE COMMITTEE do the following:**

- 1) Actively cultivate relationships with potential entrepreneurial owners, investors, and advisors who can support the execution of these projects.
- 2) If needed, develop and execute on a PR and Communications plan to promote the opportunities and further build community buy-in and work to find potential owners.
- 3) Develop a process in which to convene the Agricultural Committee on an annual basis to review progress on this strategic plan and make any required changes in order to maintain a living, dynamic regional strategic plan for the agricultural economy.

## **We recommend that the AGRICULTURAL COMMITTEE do the following:**

- 1) Meet to assess the final three business plans and choose one to start with. This one opportunity should become the sole focus of an LFPP Implementation grant. This grant should cover the costs of facilitating the process, development of a more robust business plan and pro forma financials. This business plan and pro forma will likely need to be confidential in order to protect the entrepreneur involved and avoid competitive disadvantages.
- 2) Meet with the PCEDA on an annual basis to review progress and update growth strategies as needed.
- 3) Assist with providing leads for entrepreneurs, or when there is an entrepreneur involved - provide advisory support as appropriate.

## **We recommend that ENTREPRENEURS reading this report do the following:**

- 1) Connect with PCEDA, visit the county and meet the key players.
- 2) Begin seeking specific site locations and conducting site specific feasibility assessments.
- 3) Consider developing local advisory boards that include county officials, farmers, and other local leaders.
- 4) Continue building on the foundational mini business plans provided in this report. Make use of any business planning resources available to assist with market research and the development of a robust, viable, and comprehensive business plan.
- 5) Begin building your capital table to understand the various sources and uses of capital you may need and be able to leverage.

## **We recommend that ALL READERS of this report do the following:**

- 1) Get involved and support the implementation of these opportunities in any appropriate way. These are large projects and will require a lot of community support to be successful.
- 2) Send this report to anyone who might be interested in investing their time or financial resources in one of these agricultural opportunities in Perry County.



## A Different Kind of Agricultural Plan

Although this report is an agricultural plan, it will not help farmers determine the best crops to plant or the best ways to maximize the yield per animal when raising beef. We have found that most farmers either know how to farm or can find the resources they need to learn. What they often need support with is business planning, financial management, building partnerships with supply chain partners, and understanding the financial impact these opportunities could have on their farm's financials.

This project was not a traditional feasibility study. The question we were seeking to answer was not “Will a particular business venture work in Perry County?” Rather, we began with a broad assessment of the county's strengths, weaknesses, and unique assets that could be leveraged. Along the way, we developed a running list of possible opportunities that could be pursued further and vetted. Ultimately, we were seeking agricultural-related programs and facilities that would be most likely to be viable in Perry County AND that were likely to have a significant positive impact on the region's agricultural economy.

## Collaboration & Engagement

Along the way, we made sure to involve the farmers in the dialogue. We did this by assembling and engaging with the newly formed Perry County Agricultural Committee. In collaboration with this group, we went through a rigorous process of narrowing down the opportunities.

Throughout this project, we relied on regular collaboration and communication with two specific groups of people who we will refer to throughout this report.





### The Executive Committee, which includes:

- Martha Roberts, Board Chair of PCEDA
- Michelle Jones, Program Director at PCEDA
- Patti L. McLaughlin, Board member of PCEDA, Chief Credit Officer at The Bank of Landisburg

### The Agricultural Committee, which includes:

- Donny Bartch, Merrimart Farms
- Will Brownback, Spiral Path Farm
- Pete and Heather Brummer, Brummer's Happy Breeze Farm
- Jim Fuller, PCEDA and President of the Perry County Farm Bureau
- Duane Hertzler, PCEDA Board Member
- Dave McLaughlin, Little Germany Farms
- Brooks Miller, North Mountain Pastures
- Bill Roberts, Perry County Land & Cattle
- Jeff Trout, Trout Farms and Bootleg Creamery
- Shawna Weller, Weller's Dairy



We met almost weekly with the Executive Committee to review project progress, plan next steps, and coordinate the farmer survey and the formation and engagement of the Agricultural Committee.

We met at least three times with the Agricultural Committee, engaged this group in helping to disseminate the farmer survey, and ultimately vote on which opportunities would become the focus of the business planning process. This committee allowed us to regularly and meaningfully gather feedback from a representative group of farmers, which in turn helped us refine the focus of the research. Ultimately, the collaboration with these farmers was critical in shaping this Agricultural Plan for the future of farming in Perry County.

## A Bias Toward Action

As a group of entrepreneurs ourselves, Kitchen Table Consultants approaches this work with an explicit bias towards action and execution. We know from experience that nothing happens without the right people involved to make it happen. For this reason, throughout our research, we kept an eye on finding entrepreneurial owners who could potentially be involved. If we found some potential owners, we were not shy in suggesting that the agricultural committee consider these opportunities more carefully.

It should be noted that even if we did not discover a potential owner, there are likely many other people who would be interested in getting involved. For this reason, although we focused quite heavily on the top three opportunities selected by the Agricultural Committee, we will be sharing the master list of possible opportunities that were considered at different stages of our process. It should be noted however that some of these opportunities have been only minimally vetted as it was not practical within the scope of this project to conduct feasibility studies on 30+ agricultural facility or economic development program concepts.

## What Does Success Look Like?

Numerous important and ambitious objectives were originally identified at the outset of this project in the context of the grant application that funded this work.

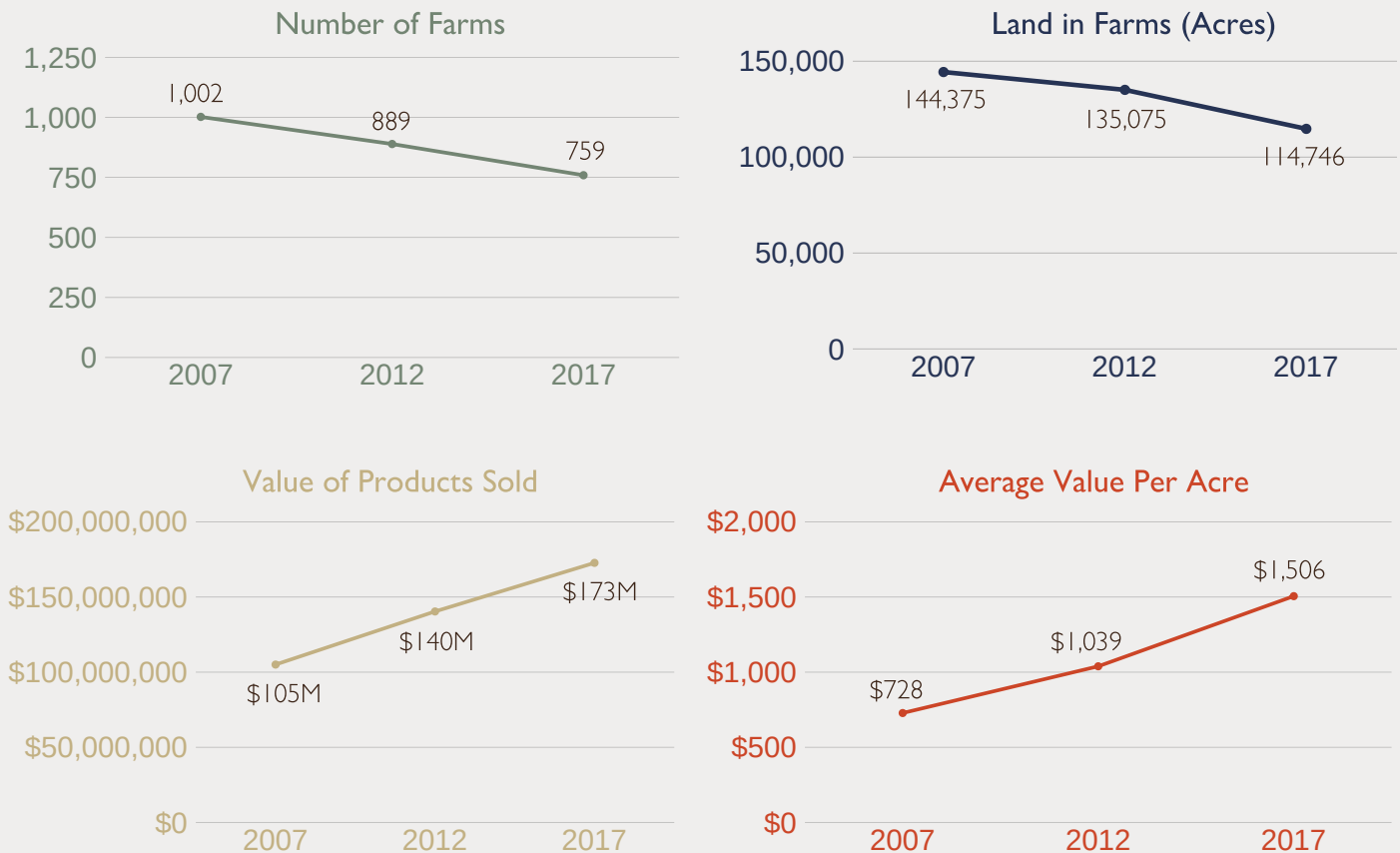
- 1) Identify solutions to make Perry County farm businesses more sustainable and economically resilient.
- 2) Provide better access to local food for under-served County residents.
- 3) Uncover complementary workforce development and educational opportunities.
- 4) Broaden the agricultural economy of Perry County through an exploration of potential economic prospects in the regional marketplace.
- 5) Connect the applicable private and public sectors within and, where applicable, outside of Perry County to establish a local and regional agricultural economy.
- 6) Recommend specific viable programs, facilities, or organizations to grow the agricultural economy in the short and long-term.

While all important goals, we worked closely with the Executive Committee to understand exactly what they hoped to accomplish with this project. This process yielded the following four high-level objectives for this project:

- 1) In the short-term, find initiatives that will offer some quick, low-cost wins.
- 2) In the long-term, develop value-added production operations.
- 3) Plan and execute projects to drive more profit for farmers.
- 4) Increase public awareness of the importance of farmer viability in Perry County.

### Perry County Agricultural Performance Dashboard

The underlying goal behind all of the business opportunities in this plan is to grow the agricultural economy. If some of the projects outlined below are implemented, how will we know if we're successfully impacted the agricultural industry? One way will be to monitor these key data points from the Agricultural census that is conducted every five years:



Since 2007, Perry County has seen a significant decline in the number of farms and acres of farmland. Although the value of the products have risen, this data reflects the increasing difficulty for small farms to be viable. It is our hope that when some of the projects in this report are implemented that the County could continue to grow the value of the farmland and reverse the decline of the farmland.

## Key Agricultural Planning Recommendations

1) We recommend that the agricultural committee in Perry County develop goals for 2022 regarding the number of farms, farm acres, and the average value per acre. This will provide a benchmark for success in a very concrete and quantifiable way. Every five years these numbers should be analyzed and logged in the Perry County Agricultural dashboard.

2) Every year, we recommend that the Perry County Economic Development Authority (PCEDA) convene the agricultural committee to review progress on all of the business opportunities outlined in this plan and adjust the development strategies as needed.

3) We recommend that the PCEDA work to actively engage the broader community in events and dialogues relating to the three top opportunities included in this plan.

4) We recommend that the PCEDA actively cultivate relationships with potential entrepreneurial owners, investors, and advisors who can support the execution of these projects. If the economic development staff do not have the capacity to pursue this task, they should consider finding funding to hire a consultant to continue to facilitate this process.



## Further Business Planning and Continued Regional Support will be Required

The top three opportunities identified in this project are a Malt House, a Grain Hub, and a Hemp Processing facility. All three are mid-sized processing or manufacturing facilities that will require further business planning, infrastructure, and regional and state support to implement. We have included three mini-business plans to lay the foundation for further feasibility and business planning to refine the business models.



Our approach in this project was to survey the agricultural landscape in Perry County, understand the county's strategic strengths, and develop a set of opportunities that were most likely to be viable, appropriate, and impactful on the region's agricultural economy.



# Research Methodologies

This project used an iterative and community participatory process for evaluating the potential opportunities for Perry County. Participatory research is “...geared towards planning and conducting the research process with those people whose life-world and meaningful actions are under study.”

We began with a series of farmers interviews and a SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) with the committee to define high level priority areas of interest requiring exploration. Based on the feedback received we started with a birds eye view by conducting a review of available literature and county agricultural data to understand the current state of the agricultural economy in Perry County.

The Farmer Needs Assessment was then designed with this information in mind. The questions and design of the survey also utilized community farmers to shape and test it. The purpose of the survey was to gather current information about what Perry County farmers are doing, what they would like to do, and understand their perspectives on future opportunities and potential barriers to success. We compared the survey responses to that of the USDA Agriculture Census for Perry County to determine that the survey respondents accurately represented Perry County farmers.



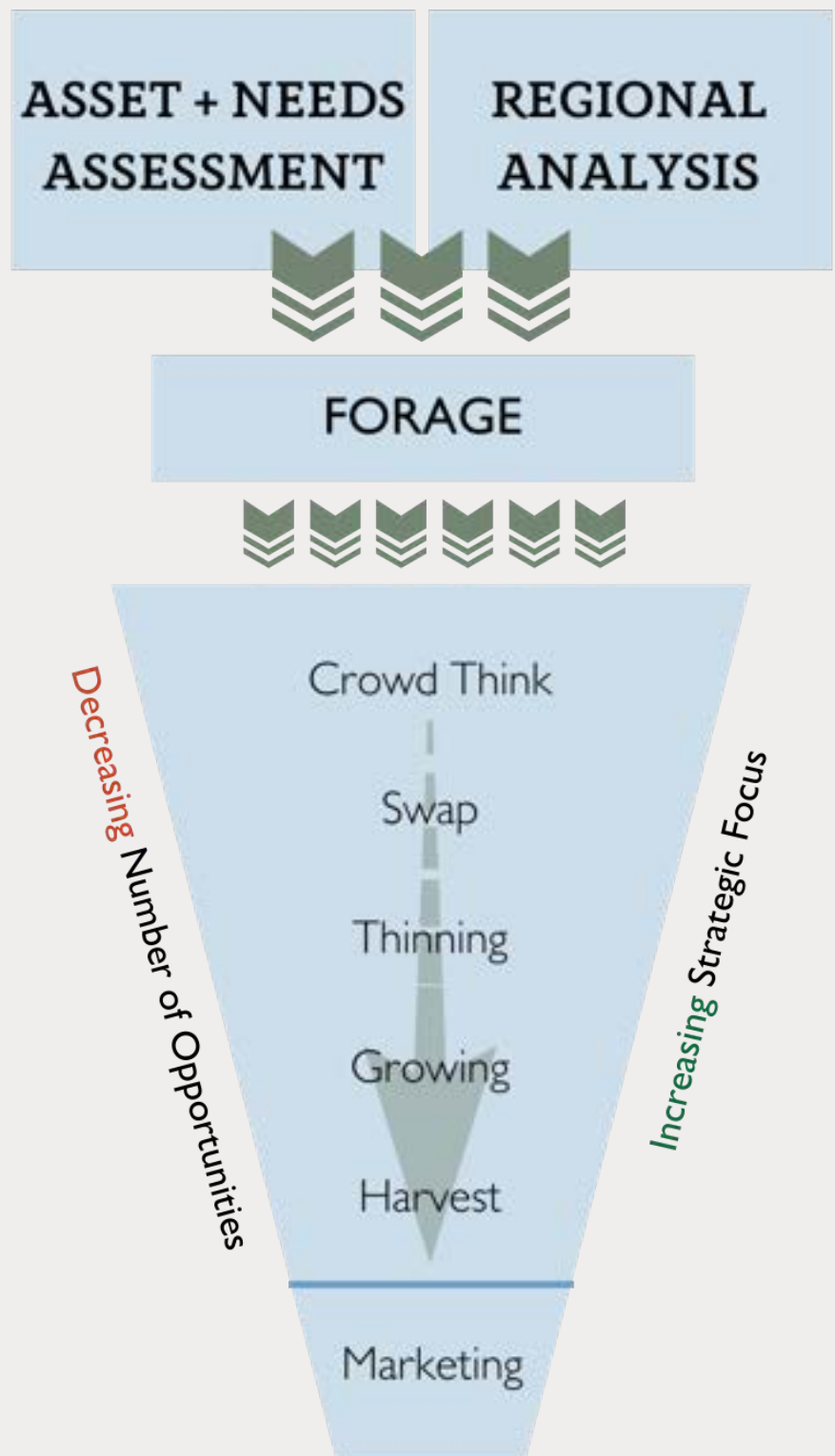
The final stages of this project further utilized both secondary (i.e. existing information) and primary sources (i.e. further interviews, analysis of assessment, and financial modeling) to make the determinations outlined in this report. Every step of the way County stakeholders were included in regular meetings and provided with Interim reports (see Appendices) in order to create a plan that was as meaningful and actionable as possible.



This research built our foundational understanding of Perry County’s agricultural landscape, the perspectives of local farmers, and the agricultural infrastructure surrounding the county. Along the way, we kept a running list of potential facilities and programs that could potentially be viable and impactful in Perry County.

As we moved into this opportunity assessment phase, we added several other opportunities to the list based on our understanding gained in the first two phases. This yielded 37 potential opportunities.

Since it would not be practical to research all 37 programs and facilities, we used a structured and our proprietary method (of Kitchen Table Consultants) to narrow the opportunities down to the final three that were ultimately selected for this strategic plan. Here’s an overview of the process, but to learn more details about each stage of the process that led to these results, please see Appendix G.





# The Top 3 Opportunities for Perry County: Mini Business Plans

## Preface

All three of the following business concepts have the potential to be viable in Perry County and make a potentially significant impact on the agricultural economy in Perry County, in terms of gross sales, job creations, farmland viability, and tax revenue for the county.

In order to move forward with implementation, the concepts will require further business planning, site assessments, market assessments, and a deeper collaboration with the entrepreneurs who will own each respective business.

## Grain Hub Mini Business Plan

### The Concept and Opportunity

A local Grain Hub that buys grain from Perry County farmers, stores the grain and sells it to malt houses, distilleries, bakeries, and food supply groups. The planned grain hub would ultimately have the capacity to store at least 500,000 bushels or 25 million pounds of grain, but would be constructed in a modular way allowing for expanded capacity as grain supply and market demand increase over time.

The grain hub would include food-grade storage and packaging and palletizing equipment to efficiently produce 50-55 lb. bags and 2000 lb. totes of barley, wheat, rye and other non-barley specialty grains (ex. oats, buckwheat, sorghum). The facility may also include some type of consumer packaging equipment, milling operation, or other grain processing. Since only approximately 50% of incoming grain would likely meet the specs for food grade<sup>2</sup>, the grain hub would also need to be designed to handle the storage and sale of animal feed grain.



2. [https://harvestny.cce.cornell.edu/pdf/submission/pdf2.1\\_pdf.pdf](https://harvestny.cce.cornell.edu/pdf/submission/pdf2.1_pdf.pdf)

# Grain Hub Mini Business Plan

## Market and Industry Analysis

The State of New York demonstrated the need for such facilities in 2015 in a feasibility study in 2017 to support their growing craft beer industry. Pennsylvania has an even larger comparable micro/craft brew industry. In order to supply even small breweries or distilleries with raw local/regional ingredients, there needs to be an aggregation point. Very few farms are scaled to offer the total supply to these businesses directly.

There is a growing craft beer industry in PA (#1 in the US), and consumers are increasingly interested in drinking local beer brewed with local grain. Growth trends in PA brewing support a market for PA grains.

An industry source commented that the craft brewery growth might be leveling out, but craft spirits are still growing very quickly. “There are more and more craft distillers. More people are trying to use specialty grain/malt; primarily unmalted grain. The issue is that they’re really price-sensitive on malt, so they just want grain. They’re looking for high-quality food quality [local] grain. There’s no really good specialty grain elevator that is food quality.”

When we asked Jen Brodsky (KTC Co-Founder) about the Grain Hub concept, she expressed, “There’s clearly a gap in the marketplace for local grain products. It’s a big opportunity. It feels so much richer and has so many more legs than some of the other opportunities on the table.”

Although the grain hub isn’t necessarily certified organic, it was one of the Governor’s priorities to develop more organic local grain production in Pennsylvania. A press release by Governor Tom Wolf stated, “There is particularly high demand in Pennsylvania for organic feed grains to serve the state’s growing organic livestock industry, but presently, much of this demand is being met by grains shipped into Pennsylvania from other states and countries.<sup>3</sup>” This may only be relevant if grain farmers were to transition to organic grain production, which could serve organic bakeries and organic livestock producers. There is currently a high demand and lack of domestic supply for organic grain for livestock feed. As a result, the US must import a large amount of organic grain.<sup>4</sup>

Although there are similar organizations in Ohio (Shag Bark Mill <https://shagbarkmill.com/>) and in Indiana (Brooks Grain - <https://www.brooksgrain.com/>), there are no food-grade grain hubs in Pennsylvania operating at this scale. The closest similar organization is Small Valley Milling (<https://smallvalleymilling.com/>) located in Halifax, Pennsylvania.

The business model in this plan would be at a much larger scale and with different methods of grain handling to preserve the quality for different end uses. While Small Valley Milling is 100% focused on whole grain and flour for culinary applications, the Perry County Grain Hub would be focused on supplying the malting, brewing, and distilling industries.

<sup>3</sup> <https://www.governor.pa.gov/newsroom/governor-wolf-announces-six-point-plan-cultivate-next-generation-pennsylvania-farming/>

<sup>4</sup> <https://ota.com/news/press-releases/20493>

## Grain Hub Mini Business Plan

### Potential Owner

An industry contact has expressed serious interest and has sent required specs for needed land and has contributed significantly to this mini-business plan. This contact is planning to start a Grain Hub and has been looking for the right location for the last couple of years. We originally interviewed them regarding a malt house in Perry County, but they were much more optimistic about the potential for a Grain Hub. They indicated that location near a lot of grain farming would be ideal.

### Agricultural Supply and the Price Opportunity for Perry County Grain Farmers

Based on our farmer survey (see Appendix D), grains were the second most commonly grown crop in Perry County, with 52 farms (or 54% of those surveyed) indicating that they were growing some type of grains. Secondary research revealed that Perry County had 51 barley farmers, growing 1641 acres of barley and producing 116,654 bushels of barley per year. Perry County has 9 farms growing Rye on 96 acres and producing 3,883 bushels per year, and 81 farms growing wheat (all wheat) on 3,493 acres and producing 228,214 bushels.<sup>5</sup>

Even if we assumed that all 228,214 bushels were sold to the Grain Hub, Perry County could likely only supply the Grain Hub with half of the grain to meet its capacity. This means that either farmers would need to increase the supply of grain, or more likely, the Grain Hub would want to provide aggregation services to other farmers in surrounding counties as well.

The commodity price for barley in 2017 was \$3.47 whereas malting barley prices have traditionally been as high as \$4.88/bushel.<sup>6</sup> In regards to local grain pricing, an industry source commented, "There's no economy of scale right now in local grain," implying costs of aggregation and distribution could be lower, which could allow for a higher price to be paid to the farmer for the grain than in commodity markets.



5 Source: U.S. Department of Agriculture (2017), Census of Agriculture, Perry County [https://www.nass.usda.gov/Publications/Todays\\_Reports/reports/agpr0719.pdf](https://www.nass.usda.gov/Publications/Todays_Reports/reports/agpr0719.pdf)

6 Source: USDA National Agricultural Statistics Service (NASS) (2017), Agricultural Prices: Prices Received for Field Crops and Fruits – United States: June 2018 with Comparisons

# Grain Hub Mini Business Plan

## Management and Staff

If the correct investments are made in facilities and equipment, the labor costs for a grain hub will be relatively low. We estimate the operation will require at least 1-3 people per shift and need three shifts during busy farming seasons. This may require some seasonal staff to assist with peak activity levels.

The makeup of the team will depend on the skills and time availability of the entrepreneur involved. Estimated total jobs created would be approximately 5-10 full-time equivalent positions once the operation achieved full capacity.

## Products and Markets

The grain hub would sell the following grains in 2000 lb. totes, 50 - 55 lb. bags, and potentially smaller packages as well. The products sold would be geared to the malting, brewing, and distilling industries but may also be appropriate for food and bakery uses.

- Barley
- Wheat
- Rye
- Other non-barley specialty grains (ex. oats, buckwheat, sorghum)

The specific product lines, pricing models, and market strategies would need to be developed in a full business plan in collaboration with the entrepreneur.

## Infrastructure and Equipment Requirements

To support this size of grain hub facility, the business would require the following infrastructure:

- 4-5 acres min (preferably 8-10 acres) of open land for development (buildings / office / bins, etc.). An old grain mill or feed mill could also provide a good shell for renovation.
- An additional 5 - 50 acres of adjacent tillable land for research/trials, and outdoor event, parking, etc.
- Close access to major roads and ideally rail too
- Single phase electric, but ideally 3 phase electric (several hundred amps) would be available
- Natural gas preferred but propane would also be possible
- Water and septic system
- Room for large driveway for semi-trucks to load and unload
- Space for a warehouse (20,000 - 100,000 square feet)
- Enough space to add additional bins, conveyors, and warehouses as the business scales over time.



In addition, the grain hub would require the following equipment:

- Truck weigh scale / station
- Grain handling equipment (conveyors, unloaders, etc.) capable of processing 1M - 10M bushels per year)
- Grain bins of various sizes to accommodate both a small quantity (one truckload) of a single-sourced specialty type of grain and a much larger single bin to accommodate a larger quantity of mixed sourced grain
- Ability to process incoming and outgoing rear dump, pneumatic, and hopper bottom semi-loads
- Ability to be flexible and support all types of trucks (pneumatic, rear dump, hopper, etc.)
- A large number of pallet racks or clearance for stackable rigid totes
- A forklift
- A skid steer
- A telehandler
- A box truck
- A pickup truck
- A flatbed trailer
- 2 semi-trucks/trailers for bulk grain

When presented with these specs for land, infrastructure, and equipment requirements for a Grain Hub, the consensus from the Executive Committee was that there would very likely have locations that would meet these specifications within Perry County, including potentially the Keystone Opportunity Zones.<sup>7</sup>



<sup>7</sup> <https://dced.pa.gov/business-assistance/keystone-opportunity-zones/>

## Grain Hub Mini Business Plan

### Financial Outlook

The startup capital required for this project is estimated at \$5 - \$6 million for the land, buildings, equipment and initial working capital for inventory. A more complete business plan with pro forma P&L, balance sheet, and statement of cash flows would be required to refine this estimated size of investment.

Level of economic impact on Perry County:

- Annual Revenue: Medium, \$1MM to \$5MM
- Direct Employment (direct hire by this business): Small, <10
- Number of Farm Enterprises Potentially Eligible to Participate: 52

### High-Level Sample Pro forma P&L

	Year 1		Year 2		Year 3		Year 4		Year 5	
	Sales (lbs.)	Revenue	Sales (lbs.)	Revenue	Sales (lbs.)	Revenue	Sales (lbs.)	Revenue	Sales (lbs.)	Revenue
% of full capacity	12%		24%		48%		80%		100%	
<b>Revenue</b>										
Malted Barley	1,500,000	\$ 210,000	3,000,000	\$ 420,000	6,000,000	\$ 840,000	10,000,000	\$ 1,400,000	12,500,000	\$ 1,750,000
Other Grains	1,500,000	\$ 195,000	3,000,000	\$ 390,000	6,000,000	\$ 780,000	10,000,000	\$ 1,300,000	12,500,000	\$ 1,625,000
Trucking and Storage Fees		\$ 20,000		\$ 24,000		\$ 28,800		\$ 34,560		\$ 41,472
<b>Totals</b>	<b>3,000,000</b>	<b>\$ 425,000</b>	<b>6,000,000</b>	<b>\$ 834,000</b>	<b>12,000,000</b>	<b>\$ 1,648,800</b>	<b>20,000,000</b>	<b>\$ 2,734,560</b>	<b>25,000,000</b>	<b>\$ 3,416,472</b>
<b>Cost of Goods Sold</b>										
Grain (paid to farmers)		\$ 305,000		\$ 610,000		\$ 1,220,000		\$ 2,033,333		\$ 2,541,667
Gross Profit		\$ 120,000		\$ 224,000		\$ 428,800		\$ 701,227		\$ 874,805
Gross Margin		28%		27%		26%		26%		26%
<b>Expenses</b>										
Labor		\$ 170,000		\$ 170,000		\$ 170,000		\$ 170,000		\$ 170,000
Utilities		\$ 19,000		\$ 19,000		\$ 19,000		\$ 19,000		\$ 19,000
Premises		\$ 91,200		\$ 91,200		\$ 91,200		\$ 91,200		\$ 91,200
Marketing	10%	\$ 42,500	8%	\$ 66,720	5%	\$ 82,440	3%	\$ 82,037	3%	\$ 102,494
<b>Total Expenses</b>		<b>\$ 322,700</b>		<b>\$ 346,920</b>		<b>\$ 362,640</b>		<b>\$ 382,237</b>		<b>\$ 382,694</b>
<b>Capital Expenditure</b>		<b>\$ 5,500,000</b>								
<b>EBIDTA</b>		<b>\$ (5,702,700)</b>		<b>\$ (122,920)</b>		<b>\$ 66,160</b>		<b>\$ 338,990</b>		<b>\$ 492,111</b>

**IMPORTANT NOTE:** High level pro formas are for discussion purposes and general guidance. A full detailed pro forma should be developed prior to starting any project. We are not stating if this business opportunity would be a good (or bad) investment. This type of ROI (return on investment) analysis was not completed as part of this project.



# Grain Hub Mini Business Plan

High-Level Sample Pro forma P&L - Assumptions

Assumes operation for 5,000 hours per year.

<b>COSTS:</b>			
1) up-front capital:	\$5,500,000		
2) Labor:	# of shifts	2	
	# of hours per shift	5000	
	Hourly rate	\$ 17.00	
	Total Labor	\$ 170,000	
3) Utilities:	# of kilowatts	50	
	# of hours	5000	
	cost per kilowatt hour	\$ 0.08	
	Total Utilities	\$ 19,000	
4) Premises:	monthly cost	\$ 7,000	
	# of months	12	
	Total Premises	\$ 84,000	
5) Grain (paid to farm	\$ per ton	\$ 203	\$ 4.88 bushel
	\$ per 1 lb. of any product	\$ 0.10	48 lbs. / bush
			\$ 0.10 per lb.
<b>PRICES:</b>			
Malted Barley	per lb	\$0.14	
Other Grain	per lb	\$0.13	



# Grain Hub Mini Business Plan

## SWOT Analysis

### STRENGTHS

- Availability of grain supply locally
- Ability to work with local Malt Houses
- Designed to handle food and beverage quality specialty grains. Infrastructure could easily also handle feed grade grain
- Most of startup capital would be invested in fixed assets, which could be used as collateral for a bank loan
- Relatively low level of labor required
- Modular design would allow for scalable growth to increase capacity as sales grow

### WEAKNESSES

- Relatively low gross margins
- Large fixed asset base that could mean a lot interest cost if debt is used to finance
- Will require skilled management in order to execute on business plan

### OPPORTUNITIES

- Add contracted trucking service as additional income stream and increase return on assets
- Source grain from other surrounding counties and states as a backup supply in case of local crop failure
- Secondary and tertiary markets (bio fuels and feed, compost feed, roasted grain, etc.)

### THREATS

- Existing grain elevators that could begin servicing the food and beverage markets in addition to the feed market
- Weather and climate - mid-Atlantic is very difficult to grow and transport grain that is suitable for food and beverage
- Pricing for outputs could decline due to global pricing and commodity price pressure

# Grain Hub Mini Business Plan

## Resources

- **Katherine Rapin**

- Local grain enthusiast and writer
- Partner owns Lost Bread bakery in Philadelphia
- [katherine.rapin@gmail.com](mailto:katherine.rapin@gmail.com)



- **New York State Brewery Supply Chain Analysis**

- [https://harvestny.cce.cornell.edu/pdf/submission/pdf21\\_pdf.pdf](https://harvestny.cce.cornell.edu/pdf/submission/pdf21_pdf.pdf)

- **Dylan Baird, Philly Food Works**

- Potential Grain Hub customer
- [dylan@phillyfoodworks.com](mailto:dylan@phillyfoodworks.com)



- **PA Redevelopment Assistance Capital Program**

- Potential funding source
- Large project-based grants between \$1M and \$50M
- Provided on a reimbursement basis and requirements of a 50% match
- <https://www.budget.pa.gov/Programs/RACP/Pages/Main%20Page.aspx>

# Hemp Processing Facility Mini Business Plan

## State of the Hemp Market and Industry

The passage of the 2018 Farm Bill created a new market for industrial hemp. A majority of the cultivation and processing resources have since been directed towards cannabinoid extraction (such as CBD) due to the relative high return per acre. Other products derived from hemp have taken a backseat to cannabinoids but will likely become a greater share of the overall market over time. Consumer demand for hemp derived products is high and many large companies are interested in exploring hemp as a raw material. Clothing brands like Patagonia are producing extensive lines of clothing made from Hemp fiber.<sup>8</sup>

Before 2019 there was minimal hemp processing capacity or supply chain in the US. Access to harvest and processing continues to be a bottleneck to this new industry - resulting in many PA farmers experiencing crop loss. Investors and entrepreneurs seeking to enter the industrial hemp market understand this opportunity and are looking to fill these gaps in the supply chain.



## The Hemp Fiber Opportunity for Perry County

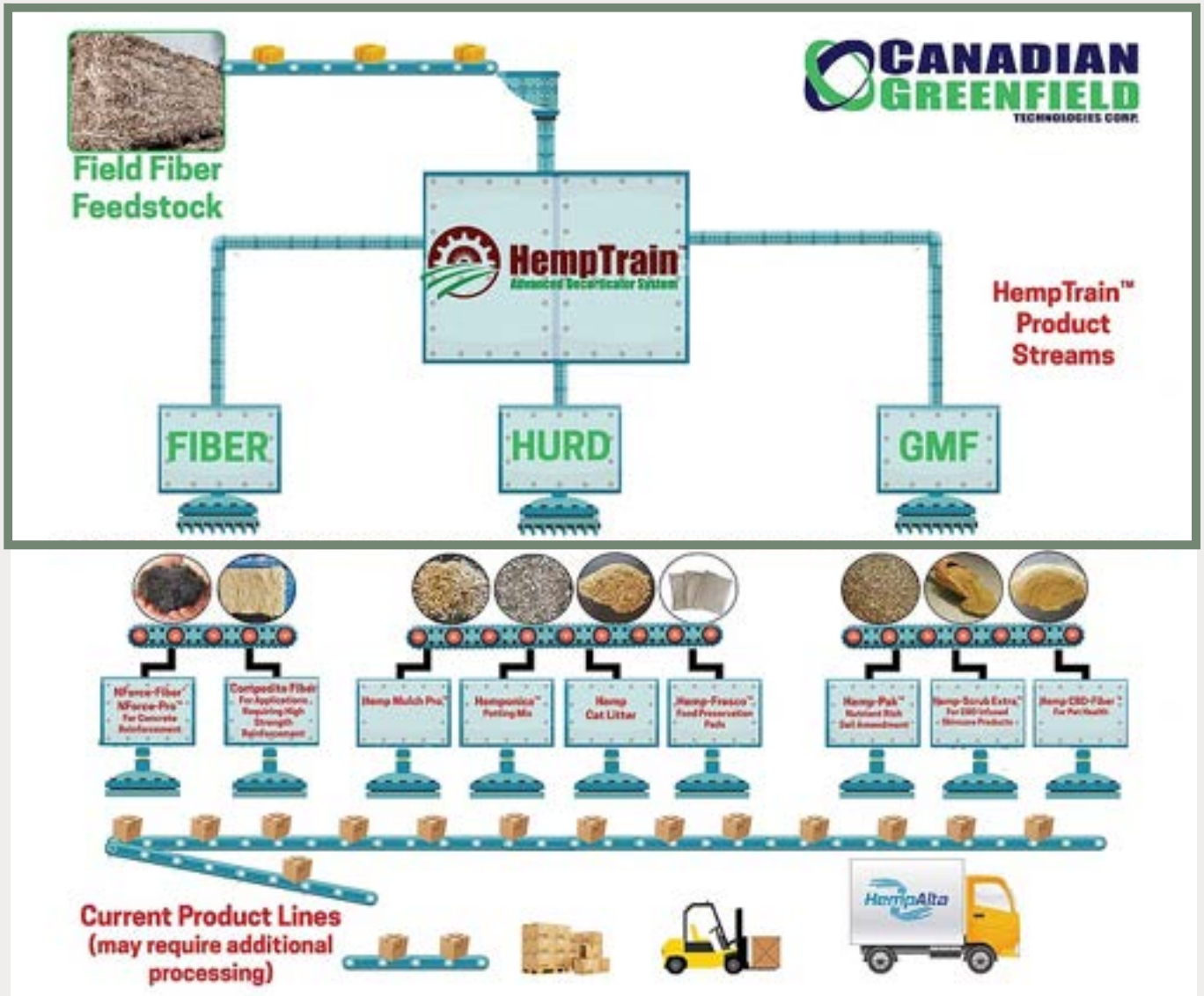
While there are numerous hemp-derived products and industries that all represent potentially attractive opportunities, we believe the most appropriate and compelling hemp opportunity for Perry County is to develop a processing facility that intakes raw hemp (typically in bales) and processes it into three main categories of shelf-stable materials: bast fiber, hurd, and green microfiber (GMF).

### Why is a Raw Hemp Processing Facility the Best Hemp Opportunity for Perry County?

- This type of business would leverage Perry County's agricultural assets and proximity to a large number of grain farmers who could potentially grow hemp if they saw the potential to increase their revenue per acre by growing hemp.
- This type of facility will position the County to supply a wide variety of potential sub industries (e.g. hemp concrete, hemp clothing, hemp cat litter) with raw materials in the long-term.
- In the short-term, this type of facility will also yield CBD concentrate, which (according to our high-level financial analysis) should be able to support a profitable processing business even IF the other raw outputs are not sold in the short-term.
- Many of the secondary markets for these products are early in their development and relatively unproven. For this reason, we believe these sub-industries would create a higher level of market risk than a raw processing facility.

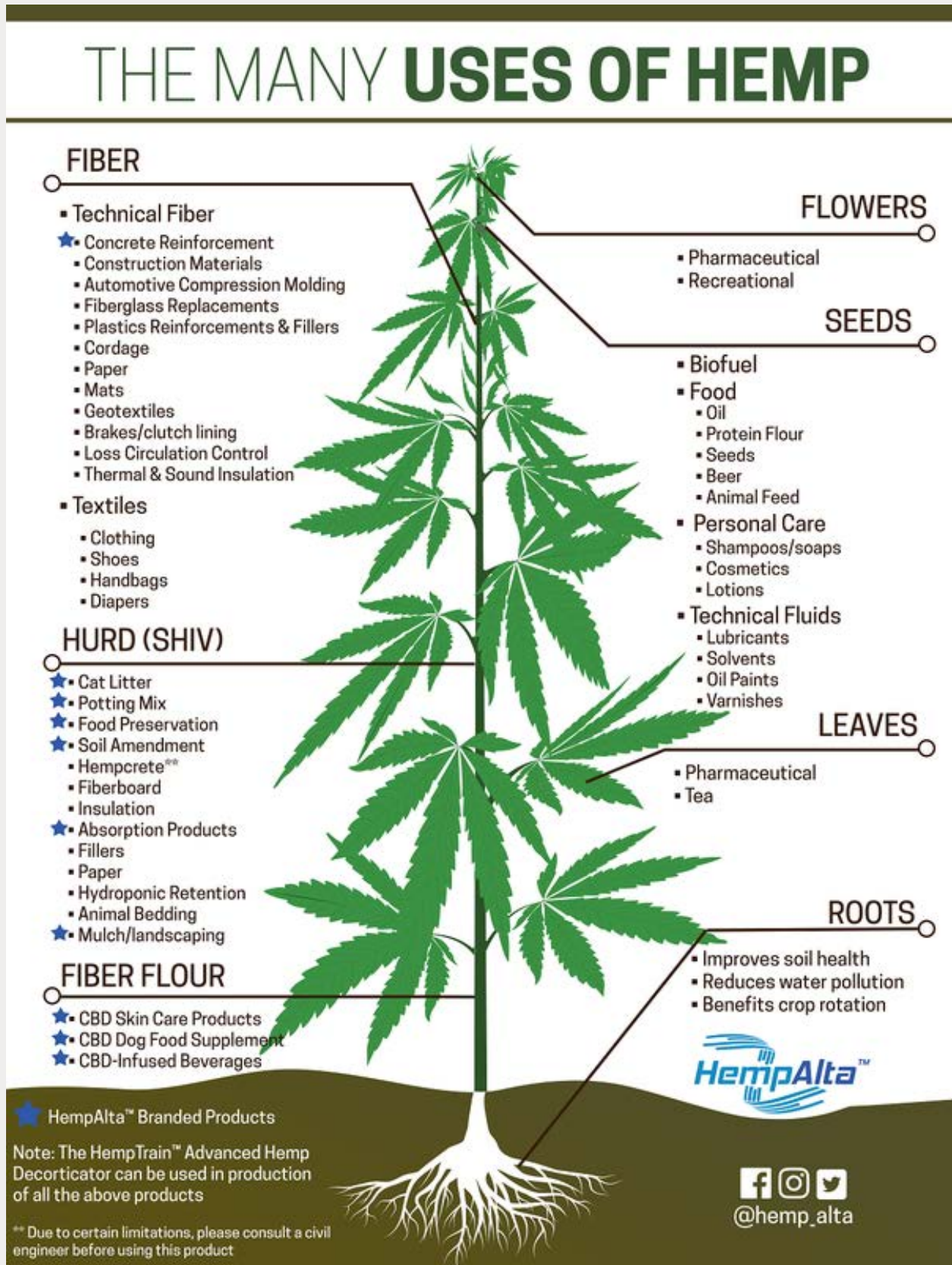
<sup>8</sup> <https://www.patagonia.com/shop/hemp-clothing>





While many pieces of separate equipment could be assembled at potentially a lower cost than a Hemp Train, a Hemp Train will provide an all-in-one solution that will likely decrease ongoing support costs and provide an entrepreneur with more turn-key processing solution.





Access to processing creates a regional market for raw hemp, a plant that any grain farmer in Perry County can theoretically produce with standard farm equipment. Preference would be given to an operator who is willing to pay a higher than commodity price to farmers for raw material. The financial model included in this plan models paying farmers ten times the commodity price. This type of farmer-focused processing facility could also be designed through a profit sharing model in order to decrease risk to the processing facility.



# Hemp Processing Facility Mini Business Plan

## Management and Staff

- General Manager - Operations Management & Sales - \$65k
- 2 people per shift x 2 shifts @ \$25/hr

## Products and Services

Processing and stabilization of raw hemp into three main materials: bast fiber, hurd, and green microfiber (GMF). These materials can be sold as-is in some cases (hurd for animal bedding) but in most cases will require further processing to add value and utility to the end consumer. For example, the bast fiber must be de-gummed before it can be woven into textiles. Access to these stable raw inputs will attract innovation. Hempcrete plants, textiles, plywood, flooring and retail manufacturing could all be complementary and physically adjacent to the main plant. Thus a Perry County Hemp Train could spur a wave of new economic opportunity.

Aggregation of material on a regional basis gives buyers confidence of reliable and scalable supply chain versus dealing with individual farmers or brokers. Conversely, it gives the farmer access to markets, contracts and buyers they may not otherwise be eligible for based on the individual scale of their operation.

## Facility Requirements

- Ideally a hemp processing facility would be located in an existing warehouse or industrial facility with room for dry storage and expansion.
- A shuttered mill or concrete plant could be an ideal base to build on.
- Loading dock
- 15,000 square ft. Machine footprint is ~1200 SF but material handling and storage takes up a significant amount of space. Minimum of 20 ft ceilings.
- Electricity: 3 Phase, 200 amp service. (No gas or propane required)
- No water required except for general sanitation of facility.
- Consider complementary businesses (industrial park model).

## Other Specifications for a Hemp Train

- Throughput: ~2000 lbs/hr (approximately 10-12 million lbs /year), feedstock-dependent
- Area Required: ~20' (6 m) X ~53' (16 m)
- Machine Height: ~16' (5 m) (~19' needed for installation)
- Machine Weight: ~32,000 lbs (14500 kg)
- Feedstock Bale Size: Up to 8' x 5' x 6' (2.4m x 1.6m x 1.8m), accepts round and square bales
- Hurd Fiber Particle Length: From 1/8" (3mm) to 2" (50mm)
- Power Requirement: ~70 kVA (84 Amps @ 480V 3PH)

## Market and Industry Analysis

### Cannabinoid Market (e.g. CBD or cannabidiol)

- CBD sales across all U.S. markets are expected to reach \$20 billion by 2024 – more than ten times the \$1.9 billion generated in 2018<sup>9</sup>
- “Hemp-Derived CBD Market to Reach \$22 Billion By 2022”<sup>10</sup>
- “Analysts at Arcview Market Research and BDS Analytics see worldwide CBD sales surpassing \$55 billion by 2024. Even Piper Jaffray says the market could be worth up to \$100 billion.”<sup>11</sup>



### Global Fiber Market<sup>12</sup>

- Global Hemp Fiber market size will increase too from \$190 Million in 2018 to 280 Million by 2025, at a CAGR of 5.1%. The hemp fiber industry is fragmented. With more than 100 manufacturers in the world, most of the products come from China, Europe and Canada.
- China is the world-leading producer of hemp where it has been cultivated for several thousand years and is mostly used in textiles. China is the main exporter of hemp fiber and hemp textiles.
- Russia and Ukraine are also important providers of hemp for textiles.
- Hemp fiber in Europe is mainly produced in France, Germany, UK, etc, with its main use in pulp and paper and composite materials. The import and export business between European countries is frequent, but generally the consumption of hemp fiber is relatively even.
- Canada hemp fiber manufacturers mainly supplies hemp products to satisfy the need of the United States.



9 <https://bdsanalytics.com/wp-content/uploads/2019/08/BDS-Analytics-The-Global-Cannabinoids-Market-Will-CBD-Overtake-THC.pdf>

10 <https://blog.brightfieldgroup.com/hemp-cbd-market-to-reach-22-billion-by-2022>

11 <https://finance.yahoo.com/news/global-cbd-growth-just-beginning-124700351.html>

12 <https://www.marketwatch.com/press-release/hemp-fiber-market-2019-to-showing-impressive-growth-by-2025-industry-trends-share-size-top-key-players-analysis-and-forecast-research-2019-08-28>

## SWOT Analysis

### STRENGTHS

- Centrally located in PA
- Proximity to a farming community
- Turn-key solution to hemp processing (no custom integration of equipment needed)
- Differentiated from most other CBD-focused processing facilities.
- Goes beyond the trend of CBD-focused businesses
- Turns waste into usable goods
- Creates higher-value products than conventional decorticators
- Low-dust environment
- Alternative, renewable resource
- Proximity to wood manufacturing who could utilize some of the outputs
- Proximity to Groff North America (a strength assuming sufficient supply and demand, but could be a potential threat)
- Less of a chance of a bubble on the fiber-side compared to CBD. Less volatile.

### WEAKNESSES

- Outputs typically require further processing in order to create useful products.
- Very dependent on a single equipment supplier for support and service.
- Pricing for products is likely to be volatile.
- Capital intensive business (both for startup costs and for working capital to finance inventory and Accounts Receivables.
- Relatively high utility costs (electricity)

### OPPORTUNITIES

- The growth potential of being part of an emerging industry that is growing extremely fast.
- Enables the ability to attract other innovative hemp-based manufacturing businesses that could source inputs from the Perry County hemp train.
- In addition to fiber, build a seed and oilseed streams of revenue
- Position itself within a more stable (more sustainable) and potentially larger sector of the hemp industry in the long run (compared to CBD)

### THREATS / RISKS

- New industry entrants
- Equipment failure
- Potentially limited support if Hemp Train goes bankrupt, is acquired, or changes their level of support
- Fire (although less of a risk compared to CBD processing)
- Downstream processing and associated industries don't develop quickly enough to create the market needed.
- Future geographic exclusivity (potential proximity to Groff NA in York County)

# Hemp Processing Facility Mini Business Plan

## Equipment

- Multifunctional: Hemp Train/Canadian Greenfield
- Decortication: Formation Ag - Genesis Fiber Track (under development) portable, tractor trailer mounted decortication. Would still require additional equipment to process, separate and dry hemp.
- Loading Dock
- Skid Steer
- Fork Lifts
- Storage Racks for space use efficiency



## Facility Renovation

### Site

- Highly dependent on local inventory.
- Currently limited options listed on MLS in Perry County industrial/commercial real estate.
- Perhaps focusing more towards Agricultural properties with existing barns for more options or distressed properties not on the market.
- New Construction could be cost prohibitive without support from county.
  - Existing county owned property to lease and/or build on?
  - Lehigh County has a Farm Incubator they own and operate with purpose-built buildings on it.
  - Cross-opportunity with Farm Preservation funds
  - USDA Value-added Processor Grants.
  - USDA Rural Development funds
  - How would Perry County classify hemp processing? In Colorado they are zoned and inspected under the same regulations as “seed cleaning” facilities allowing for processing on farm without industrial zoning.

### Building / Tenant Improvements

- Cleaned/Sealed floors in production area
- Storage racks for raw and processed material
- Temporary Truss Arch Structures are affordable and can be easily dismantled, moved and expanded.

## Approximate Financial Investment

- \$1,550,000 for the Hemp Train
- \$500,000 other Startup Costs
- \$500,000 in Working Capital
- \$2,550,000 Estimated Total Investment



# Hemp Processing Facility Mini Business Plan

## High-Level Sample Pro forma P&L and Assumptions

Baseline model provided by Canada Greenfield, manufacturers of the Hemp Train equipment.  
Adapted mainly in order to model a decreasing CBD price, an increased price paid to farmers.

	Year 1		Year 2		Year 3		Year 4		Year 5	
	Sales (lbs.)	Revenue	Sales (lbs.)	Revenue	Sales (lbs.)	Revenue	Sales (lbs.)	Revenue	Sales (lbs.)	Revenue
% of full capacity	12%		24%		48%		80%		100%	
<b>Revenue</b>										
Bast fiber	180,000	\$ 136,800	360,000	\$ 273,600	720,000	\$ 547,200	1,200,000	\$ 912,000	1,500,000	\$ 1,140,000
Hurd	780,000	\$ 592,800	1,560,000	\$ 1,185,600	3,120,000	\$ 2,371,200	5,200,000	\$ 3,952,000	6,500,000	\$ 4,940,000
Green microfiber (GMF)	240,000	\$ 2,736,000	480,000	\$ 4,377,600	960,000	\$ 7,004,160	1,600,000	\$ 9,336,880	2,000,000	\$ 9,336,880
<b>Totals</b>	1,200,000	\$ 3,465,600	2,400,000	\$ 5,836,800	4,800,000	\$ 9,922,560	8,000,000	\$ 14,202,880	10,000,000	\$ 15,418,880
<b>Cost of Goods Sold</b>										
Feedstock (paid to farmers)		\$ 600,000		\$ 1,200,000		\$ 2,400,000		\$ 4,000,000		\$ 5,000,000
Gross Profit		\$ 2,865,600		\$ 4,636,800		\$ 7,522,560		\$ 10,202,880		\$ 10,418,880
Gross Margin		83%		79%		76%		72%		68%
<b>Expenses</b>										
Labor		\$ 250,000		\$ 250,000		\$ 250,000		\$ 250,000		\$ 250,000
Utilities		\$ 22,800		\$ 22,800		\$ 22,800		\$ 22,800		\$ 22,800
Premises		\$ 91,200		\$ 91,200		\$ 91,200		\$ 91,200		\$ 91,200
Marketing		\$ 152,000		\$ 304,000		\$ 608,000		\$ 760,000		\$ 760,000
<b>Total Expenses</b>		\$ 516,000		\$ 668,000		\$ 972,000		\$ 1,124,000		\$ 1,124,000
Capital Expenditure		\$ 2,550,000								
<b>EBIDTA</b>		\$ (200,400)		\$ 3,968,800		\$ 6,550,560		\$ 9,078,880		\$ 9,294,880

Assumes operation for 5,000 hours per year.

### COSTS:

1) up-front capital:	\$2,550,000	
2) Labor:	# of shifts	2
	# of hours per shift	5000
	Hourly rate	\$ 25.00
	Total Labor	\$ 250,000
3) Utilities:	# of kilowatts	60
	# of hours	5000
	cost per kilowatt hour	\$ 0.08
	Total Utilities	\$ 22,800
4) Premises:	monthly cost	\$ 7,600
	# of months	12
	Total Premises	\$ 91,200
5) Feedstock (paid to farmers)	\$ per ton	\$ 1,000
	\$ per 11b. of any product	\$ 0.50
		was \$152

### PRICES:

1) Fiber fraction:	per lb (as feedstock for \$4.56 - \$5.32 per lb products - i.e. reinforcement fiber, etc.)	\$0.76
2) Hurd fraction:	per lb (as feedstock for \$3.80 per lb products - i.e. cat litter, etc.)	\$0.76
3) Green fraction:	per lb (as 10% of the current market value of CBD in each 1 lb of the product, at documented 0.7% CBD)	\$11.40
	CBD Price Change	-20%
		year 1 price decrease annually

### TOTAL ANNUAL OUTPUT CAPACITY:

1) Bast fiber:	1,500,000 lbs (15%)	\$9.12	year 2
2) Hurd:	6,500,000 lbs (65%)	\$7.30	year 3
3) Green microfiber (GMF)	2,000,000 lbs (20%)	\$5.84	year 4
		\$4.67	year 5

# Hemp Processing Facility Mini Business Plan

## Resources

### Potential Sample Location

- <https://images1.loopnet.com/d2/adnxBHtH9QsVZ2wbysFdjhAne8MwqjHxZXyZH2jHzz4/document.pdf>

### Hemp Industry Daily

- A hemp industry news website that sponsors free hemp webinars, provides business resources, and an industry directory (<https://hempindustrydaily.com/>)

### Oasis Grower Solutions

- Sponsor hemp webinars and may provide resources to assist with hemp farming (<https://oasisgrowersolutions.com/default/>)

### Crop Yield & Budget Data

- <https://cropwatch.unl.edu/2019/hemp-production-fiber-or-grain>
- Cornell - [https://cpb-use1.wpmucdn.com/blogs.cornell.edu/dist/a/7491/files/2017/04/HancharJohn-economics-of-industrial-hemp-2019-analysis-update-2019\\_01\\_22-28o6gqp.pdf](https://cpb-use1.wpmucdn.com/blogs.cornell.edu/dist/a/7491/files/2017/04/HancharJohn-economics-of-industrial-hemp-2019-analysis-update-2019_01_22-28o6gqp.pdf)
- Penn State - <https://extension.psu.edu/industrial-hemp-production>

### Fiber-Focused Hemp Companies

- <http://www.9fiber.com/> - Colorado
- <https://www.americanhempinc.com/american-hemp-services> - North Carolina
- <https://www.hempalta.com/> - Other Hemp Products (owned by Canada Greenfield)

### Market Research

- 11/2019: <https://panxchange.com/hemp-benchmarks-and-analysis-nov-2019/>
- 7/8/2019: <https://www.globenewswire.com/news-release/2019/07/08/1879566/0/en/Global-Industrial-Hemp-Market-is-Expected-to-Reach-USD-14-67-Billion-By-2026.html>
- 8/28/2019: <https://www.marketwatch.com/press-release/hemp-fiber-market-2019-to-showing-impressive-growth-by-2025-industry-trends-share-size-top-key-players-analysis-and-forecast-research-2019-08-28>



## Malt House Mini Business Plan

### Important Note

The following mini business plan (with some revisions) was provided by Stone Path Malt ([www.stonepathmalt.com](http://www.stonepathmalt.com)), a currently operating malt house in Wareham, Massachusetts. For this reason, the plan is written with a different format and style compared to the other two mini business plans.

### Preface

This mini business plan is based on the original Executive Summary for the company's full business plan, which was developed for their current malting facility in Wareham, MA. Stone Path Malt owners have provided this business plan in support of this report because they plan to open a second manufacturing location within the next three to five years and have selected Pennsylvania as a top destination. They plan to seriously consider locating their new facility in Perry County. Perry County is not however committed to necessarily working with Stone Path Malt and this plan could be used by other entrepreneurs interested in this opportunity. Stone Path Malt understands that this plan will be published publicly.

**A detailed market and site location study with revisions to this plan would also be required.**

### Concept

The malt house will produce and supply locally crafted base and specialty malt to the craft brewing industry using innovative and scalable process technology. Malt is one of the four essential ingredients used in producing craft beer. Malted barley provides color, aroma, flavor and body to every ale and lager. Craft brewers following the German Purity Law of 1516 use water, malt, hops and yeast to make their beer. Perry County malt will enable craft brewers (in and beyond PA) to create distinctive beers, enhance their local branding, and achieve further growth in an expanding and competitive marketplace.

### The Value Proposition

- Create value-added market positioning for brewers enabling products to be branded as “locally crafted beer made with locally crafted malt”
- Through local collaboration, brewers will create custom craft malts that will produce ales and lagers with unique and differentiating characteristics
- Address surety of supply forecast by providing craft brewers with superior quality malt, enhanced customer service and efficient supply chain logistics
- Offer base and specialty malt products crafted from barley varieties sourced from Perry County, North America, and Europe based on crop profile and pricing



## Malt House Mini Business Plan

### Strategic Partners

Leverage strategic partnerships with two European suppliers located in Bavaria, Germany. These partners will provide craft malting process and operational expertise produced on a quality engineered malting system. The supply partner is a craft malt producer with grain management and global supply expertise. The equipment partner is a 10th generation innovative brewing and malting equipment supplier with an international profile.



### The Opportunity

The US craft beer industry has achieved extraordinary growth in sales, volume and the number of breweries in operation causing craft brewers to face increased competition and product differentiation for their all-grain brands. Based on product type and brewing method differences, in 2018, craft brewers consumed more than 40% of the malt used by all US brewers.<sup>13</sup>

As a result, malt supply chain problems threaten future growth and sustainability of the craft beer industry. In 2014, the Brewers Association reported that the US malt supply requirements needed to meet US craft beer industry growth projections are “staggering”.<sup>14</sup> They also reported supply chain problems due to a misalignment between craft brewers and US malt suppliers. US malt suppliers are configured as large production operations that manufacture a small number of malt varieties in large quantities. These operations are designed to be aligned with the needs of large scale adjunct lager beer producers, not all-grain local craft brewers. Supply relationship gaps exist in malt product type, operational scale and custom contracting.

As a result, craft brewers have turned to European malt suppliers to meet their needs. Today, US craft brewers import more than 325,000 metric tons of malt per year.

The opportunity for producing specialty malt in the US can be summarized as follows:

- The craft beer market is under-supplied and under-served by US malt suppliers
- Surety of malt supply combined with increasing demand will threaten the sustainability and growth of the craft beer industry
- A new malt supply operation model is needed. That model must be properly aligned with the needs of craft brewers in terms of malt product type, operational scale and custom contracting

<sup>13</sup> Brewers Association-Malting Barley Characteristics (2018); brewersassociation.org

<sup>14</sup> [https://s3-us-west-2.amazonaws.com/brewersassoc/wp-content/uploads/2019/06/Malting\\_Barley\\_Characteristics\\_For\\_Craft\\_Brewers.pdf](https://s3-us-west-2.amazonaws.com/brewersassoc/wp-content/uploads/2019/06/Malting_Barley_Characteristics_For_Craft_Brewers.pdf)

To capitalize on this opportunity, this malt house will operate as a properly scaled supplier of locally crafted base and specialty malt. The malt house will be mid-sized compared to other artisanal malt houses, but still much smaller than the larger-scale competitors in the midwest and abroad. The company will combine modern process technology with traditional European craftsmanship to produce our specialty malts. We'll initially offer our products to craft brewers of Pennsylvania.

## The Market

The US craft beer industry represents the primary market for craft malt. The craft beer industry has a national profile with a strong Pennsylvania market.

### US Craft Beer Sales & Volume Growth

- A \$27.6B growth market within a \$114.2B overall US beer market that declined 0.8% in 2018
- Craft beer sales were \$27.66B in 2018 a growth rate of 7%
- 2018 craft beer represents 13.2% of the total US beer production compared to 11% in 2014
- 2018 craft beer production was greater than 25.6M bbls (barrels)
- Target industry goals: achieve 20% of the total US beer production by 2020 and 22% by 2022



## Brewery Growth

- The number of craft breweries is at the highest level in 125 years
- US permitted brewers increased from 1,447 to more than 4,269 from 2005 to 2015
- Malt Demand Increase
  - In 2013, craft brewers produced 7.8% of the overall US beer volume but consumed nearly 25% of US malt production. More than 3 times the consumption by volume output.
  - Craft brewers use European supply for their specialty malt to meet product type and volume demand

## Local Market Profile<sup>15</sup>

The Pennsylvania craft beer industry has a \$6.3 billion dollar economic impact, producing approximately 37M US gallons each year with more than 354 operating breweries. PA also rank number 1 in the US for craft beer production.

<sup>15</sup> Brewers Association-State Craft Beer Sales & Production Statistics (2018); brewersassociation.org



## Malt House Mini Business Plan

### Operations

Locating a Malt House in Perry County, Pennsylvania is a strategic component of our business plan. This region provides near access to a broad spectrum of grain farmers capable of growing barley for the malt house. The state also offers 354 craft brewers brewing a full range of seasonal ales and lagers.

The malt house will have an initial annual capacity of approximately 400 tonnes or 880,000 pounds of malt utilizing a 10 tonne malting system. Strategically capturing this initial market share will create future opportunities for growth and expansion. The facility and equipment will be designed to scale to an annual capacity of 1200 tonnes or 2.6 million pounds utilizing a 30 tonne malting system.

The malt house will produce malt using a 3-step process which includes: steeping, germinating, and kilning. We have selected world class innovative processing equipment designed for quality, efficiency, consistency, scale-ability and product customization.

Securing a high quality, competitively priced supply of malting barley is important to the success of the operation. To accomplish this we will secure barley as much as possible from local farmers in Perry County. However, as a backup and to provide additional scale as the barley supply increases locally, we will also source barley from multiple sources to include US, Europe and Canada.

### Competition

Major US malt suppliers are configured as large production operations that manufacture a small number of malt varieties in large quantities. These operations are designed to be aligned with the needs of large scale adjunct lager beer producers, not all-grain local craft brewers. Artisan malt companies are generally too small in scale with inadequate quality and consistency to fully service craft brewers. There are three artisan malt companies located in Pennsylvania. The primary competition comes from European malt companies exporting their products to the US and sold through malt distributors. While these products are preferred by most craft brewers over US malt suppliers, there are no European suppliers with US based malting operations offering custom contracts and local supply.



## Malt House Mini Business Plan

### Management and Staff at Stone Path Malt

#### About Us

After growing up in central Massachusetts, Mike and Mark traveled separate paths. Each eventually returned home to New England, where they married local sweethearts and started families. Mike and Mark both traveled extensively for their careers, but their hearts and homes stayed in New England. Following successful careers, they reunited to redefine the craft malt industry and created Stone Path Malt. Their passion, experience, and family values paved the path for pushing the boundaries of the future of craft malting in New England.



#### Michael T. Schroth, Co-Founder

Prior to founding Stone Path Malt in April 2015, Michael served as Founder and President of Indiconics, LLC (est. 2004). Indiconics provides integrated business services to technology driven companies including: business development, product development, operations management and process technology. Integrating over 25 years of experience in sales, business development, manufacturing, engineering and R&D, Michael possesses unique business qualifications. With market vision and a results-oriented management style he's lead multiple "first to market" opportunities. Michael has extensive international business experience servicing foreign owned global companies. Michael held senior management positions within US subsidiaries of ULVAC Inc., Corning Inc., and Hitachi Kokusai Electric Inc.

#### Education

- Bachelor of Arts Degree, Stonehill College
- Bachelor of Science Degree in Electrical Engineering, University of Notre Dame

#### Mark St. Jean, Co-Founder

Prior to founding Stone Path Malt in April, 2015, Mark served as Founder and President of Sippewissett Capital, LLC, a structured finance company focused on providing capital in the small to middle market space to real estate developers, operators and business owners. Prior to founding Sippewissett Capital, LLC Mark worked in the real estate industry for 27 years across a broad spectrum of disciplines that included private equity, investment banking, asset management, acquisitions, dispositions, lending and brokerage. Mark is a licensed real estate broker in the Commonwealth of Massachusetts and held NASD Series 7 and Series 63 Licenses.

#### Education

- Bachelor of Arts Degree, Rollins College
- Master of Arts Degree, Lesley University
- Master of Business Administration Degree, Carroll School of Management, Boston College



## Malt House Mini Business Plan

### Financials and High-Level Sample Pro forma P&L

#### Revenue Sources

- Local malt production for craft brewers
- Import malt distribution for craft brewers

#### Operating Pro-forma (Year 3)

- Capacity: 30 tonnes (1,200 tonnes/yr or 2.6 M lbs/yr)
- Location: Perry County, PA
- Employees: 8
- Projected Revenue: \$3.3M
- Operating Profit: \$909K
- Profit Margin: 27%

#### Capital Requirements

- Initial start-up costs: \$2,500,000
- Malt System: \$1,278,750
- Grain Handling/Storage & Malt Packaging: \$465,000
- Facility & Equipment: \$145,000
- Working Capital: \$611,250
- Total Capitalization (5 year): \$3,589,000



## Financials and High-Level Sample Pro forma P&amp;L

<b>Income and Expense Statement</b>			
	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>Sales Revenue</b>			
Local Malt Revenue	696,960	1,393,920	2,090,880
Home Brew Revenue	17,600	35,200	52,800
Import Revenue	705,620	834,120	973,160
Tap Room Revenue	124,000	186,000	248,000
Other	-	-	-
<b>Effective Gross Revenue</b>	<b>1,544,180</b>	<b>2,449,240</b>	<b>3,364,840</b>
<b>Expenses</b>			
<b>Cost of Goods Sold</b>			
Barley Grain	110,000	220,000	330,000
Pilsner	137,583	165,100	196,547
Vienna	50,043	62,276	74,731
Munich	59,354	73,863	88,635
SPM	42,900	42,900	42,900
<b>Total Cost of Goods Sold</b>	<b>399,880</b>	<b>564,139</b>	<b>732,814</b>
<b>Operating Expenses</b>			
Malt System Electricity	15,600	31,200	46,800
Facility Electricity	40,000	40,000	40,000
Gas	37,856	75,712	113,568
Water	5,200	10,400	15,600
Repairs and Maintenance	20,000	20,000	20,000
Packaging Materials	30,884	48,985	67,297
Rent (Gross Net of Utilities)	140,000	140,000	140,000
Silo Lease	6,600	6,600	6,600
Real Estate Insurance	5,000	5,000	5,000
Liability Insurance	4,000	4,000	4,000
Tap Room	36,000	54,000	72,000
Tap Room Supplies	20,000	20,000	20,000
Barley Shipping (Rail)	110,000	220,000	330,000
Import Shipping (Montreal)	72,310	86,772	103,300
Import Shipping (Boston)	80,684	94,962	109,499
Transfer Rate	4,550	5,460	6,500
Domestic Shipping (Montreal)	12,771	15,325	18,244
Container Stripping	800	800	800
Harbor Maintenance Fee	500	705	916
Merchant Processing Fee	1,384	1,952	2,536
Wages and Benefits	231,627	367,386	504,726
Office Supplies	5,000	5,000	5,000
IT	6,000	6,000	6,000
Marketing	38,605	61,231	84,121
<b>Total Operating Expenses</b>	<b>925,369</b>	<b>1,321,489</b>	<b>1,722,506</b>
<b>Total Operating Expenses</b>	<b>1,325,249</b>	<b>1,885,628</b>	<b>2,455,320</b>
<b>Operating Profit</b>	<b>218,931</b>	<b>563,612</b>	<b>909,520</b>

**IMPORTANT NOTE:** High level pro formas are for discussion purposes and general guidance, a full detailed pro forma should be developed prior to starting any project. We are not stating if this business opportunity would be a good (or bad) investment. This type of ROI (return on investment) analysis was not completed as part of this project.

# Six Other Potential Opportunities for Perry County

In addition to these three top opportunities, the process followed in this project revealed six additional opportunities that were seriously considered, and may still have potential in Perry County.

Although each would require even more additional research than the top three opportunities, we provide them here in hope there's an entrepreneur or investor reading this report who would be interested in considered these other opportunities.

## Second Tier Opportunities

For the following two opportunities, we sought to understand the inputs, the operation, and the potential market for the outputs. Throughout our interviews with industry contacts, subject matter experts, and potential stakeholders, we kept a lookout for potential owners to further plan and execute on the opportunity.

Along the way, we made note of potential “red flags” (cautionary perspectives or data points that make it less likely for the venture to be successful) and potential “green flags”, or optimistic perspectives or data points that might increase the likelihood of success.

### 1. Regional Local Food eCommerce Company

#### Overview

A regional local food eCommerce business that buys locally raised meats and other agriculturally-based products from Perry County farmers, and sells them to urban markets and throughout the East coast using Direct-to-Consumer marketing and eCommerce technology, with a potential focus on subscriptions boxes.

Research initially was focused on either selling Perry County products to existing eCommerce businesses or starting a new eCommerce business based in the County. We came to believe that the most viable scenario would be for a new company to be formed that is located in Perry County. This facility would include cold storage, an order processing, and shipping operation as well as a loading dock. Delivery could be done through its own fleet and/or in partnership with regional delivery services.

## Original Justification

National trend, but the regional focus would increase marketability and decrease distribution costs.



### Green Flags

- Food eCommerce (the sale of food online and shipped to consumers directly) is a national trend with \$14.9 billion of food sold online each year. 70% of US Consumers will buy food online by 2022.<sup>16</sup> In addition, 2.8% of all eCommerce sales are food.<sup>17</sup>
- KTC has seen some success with other clients, particularly with [www.DutchMeadowsFarm.com](http://www.DutchMeadowsFarm.com) who sources from a number of Amish farms and delivers a large number of products regularly to Philadelphia and New York City. In addition, in Indiana, Seven Sons Farm (<https://sevensons.net/>) has pioneered the use of direct marketing and is selling products from many other regional farms (<https://sevensons.net/vendors>).
- Although most Perry County farmers are not selling direct-to-consumer currently (as indicated in the farmer survey), Philly Food Works (<https://phillyfoodworks.com/>) indicated that their model of an eCommerce business includes processing whole animals and buying cases of produce and breaking them down into consumer-friendly sizes.
- The farmer survey indicated a wide range of products that could (in theory) be made available in an online marketplace in a “whole shopping cart” kind of way, which was identified as a key success factor in earlier research due to the ability to generate a high enough revenue per box to cover delivery costs. Specifically, Perry County farmers are producing: Beef (45 farms), Dairy-fluid milk (32 farms), Poultry (18 farms), Vegetables (14), Pork (13), Eggs (12), Floriculture (8), Lamb/Sheep meat (8), Berries and/or Grapes (7), Tree Fruits (7), Value-added dairy\* (5), Value-added meat (5), Dairy-Goat (4), Value-added - canned\* (4), Goat meat (3), Mushrooms (3), Fermented drinks\* (1).



<sup>16</sup> Weinswig, Deborah. “Online Grocery Set To Boom In 2018 (As Amazon Acknowledges Online Grocery A Tough Market To Crack).” Forbes, Forbes Magazine, 3 Mar. 2018, [www.forbes.com/sites/deborahweinswig/2018/03/01/online-grocery-set-to-boom-in-2018-as-amazon-acknowledges-online-grocery-a-tough-market-to-crack/#70cafe3f520b](http://www.forbes.com/sites/deborahweinswig/2018/03/01/online-grocery-set-to-boom-in-2018-as-amazon-acknowledges-online-grocery-a-tough-market-to-crack/#70cafe3f520b)

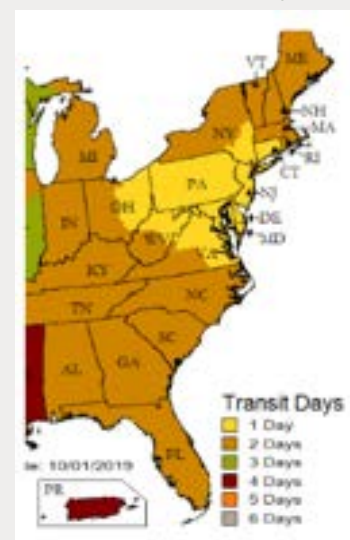
<sup>17</sup> “Research: Food & Beverage Represents Less than 3% of U.S. Retail e-Commerce Sales.” Refrigerated Frozen Foods RSS, Refrigerated & Frozen Foods, 7 Sept. 2018, [www.refrigeratedfrozenfood.com/articles/95556-research-food-beverage-represents-less-than-3-of-us-retail-e-commerce-sales](http://www.refrigeratedfrozenfood.com/articles/95556-research-food-beverage-represents-less-than-3-of-us-retail-e-commerce-sales).





## Green Flags

- A partnership with UPS could provide the ability for Perry County to ship their farm products relatively inexpensively via Ground 1-2 Days within this broad Eastern region:
- The presence of many other Local Food eCommerce platforms indicates the potential with this model:
  - From the Farmer, MD (<https://fromthefarmer.com/>)
  - Patchwork Online Market: Asheville, NC (<https://www.patchworkurbanfarms.com/>)
  - Farmers to You, MA (<https://farmerstoyou.com/>)
  - Misfits Markets, Nationwide (<https://www.misfitsmarket.com/>)
  - WildKale, Nationwide-search products by zip code (<https://wildkale.com/user/zipcode>)



## Red Flags

- We were hoping that a company like Philly Food Works (<https://phillyfoodworks.com/>) might be willing to source from Perry County farms, but they were already receiving enough supply from farms closer to Philadelphia. They also indicated that larger eCommerce companies would likely not be interested because they're looking for the lowest cost, most proximal sources to urban markets.
- Even if Philly Food Works was willing to source from Perry County, they provided us with a sense of scale to better understand the limited market potential (at least in Philadelphia). As the largest local eCommerce platform in Philadelphia, they only buy 12 cows and 16 pigs per year and purchase about \$400,000 of produce a year.
- Philly Food Works indicated that it was (and continues to be) tremendously difficult to acquire customers for their online marketplace. This is despite its broad network in the Philadelphia area and funding support in the early years. This is a cautionary perspective about the difficulty of successfully marketing food in an increasingly complex and competitive urban market.
- Philly Food Works was concerned about the delivery costs of trucking food from Perry County into urban areas (Philadelphia, DC, Baltimore, etc.) in a cost-effective way. Their local delivery costs are a challenge already. Counter perspective, however: Dutch Meadows charges for delivery and customers seem mostly willing to pay for “real food from real farmers.”
- When we interviewed Ashlee Dugan, a former operator of Radish & Rye Food Hub in Harrisburg, PA, she suggested eCommerce in Perry County might be more likely to work selling to local institutions (schools and hospitals), which suggests this direct-to-consumer model may not work. She was concerned about the level of infrastructure, food storage and proper distribution systems needed to support an eCommerce operation in the county.



## Economic Scales

Investment (in the first 12-24 months ): Medium: \$100k to \$500k

Level of the economic impact on Perry County

Annual Revenue (within 24 months of start): Medium, \$1MM to \$5MM

Direct Employment (direct hire by this business): Medium | 1-50

Number of Farm Enterprises Potentially Eligible: 189\*  
(note: many of these farm enterprises likely existing within one farm)

## Potential Owners

None yet identified. Finding the right entrepreneurial driver who either has significant experience or a strong interest in eCommerce, digital marketing, and local food promotion would be critical in making this happen. This would suit someone with strong interpersonal skills and a keen interest in retail and local food system development.

## 2. Value Added Meat Processor

### Overview

Create a value-added processor with services that don't exist in the area. This facility would likely take in raw primals and would process the meat into a wide variety of value-added meat products. This would likely include cutting/fabrication as well as specialty processes (e.g. smoking, curing, aging, etc.) and sophisticated packaging design and equipment. The facility would likely offer a range of packaging options for farms interested in marketing their products.



## Original Justification

This processor would serve an existing demand for meat processing in the region, provide additional product opportunities or local farmer/producers, and create new local products and therefore marketing opportunities. Improved value-added products would be manufactured using smoking, cooking, dry aging, fermenting, curing, slicing, and packaging of high end or novelty products not currently produced locally.



### Green Flags

- Significant supply. Last livestock inventory taken in 2017, USDA NASS indicated Perry County was producing the following: Broilers and other meat-type chickens 740,716, Cattle and calves 32,642, Goats 996, Hogs and pigs 50,818, Sheep and lambs 1,230, Turkeys 435,572.
- Ray Mosser, a KTC contact and current seasoned USDA FSIS inspector is willing to further discuss the regulatory issues if needed.
- Rising Spring Meats (<http://www.risingspringmeats.com/>) has expressed interest in potentially being involved in this project.
- There are many examples in Vermont of consumer-friendly packaging that are beautifully branded, and selling off the quality of product, local sourcing, and the quality of packaging and marketing.



### Red Flags

- Red meat and poultry require different plans for processing and must be kept separate by space and/or time and sanitation. This could either limit the product line or increase costs to offer both.
- Facility would need to be under USDA FSIS inspection with a HACCP plan for both processing and further processing and for ready-to-eat meat (2 categories for shelf stable versus not). This type of operation would require significant regulatory knowledge and cooperation.





## Red Flags

- If the meat processor is going to also market and sell products under their own brand, it requires significant additional infrastructure, storage, marketing and distribution infrastructure and skills. If not, it would essentially be providing a service to farmers, but then they'd be responsible for marketing their own products to stores, distributors or consumers.
- Offering the type of innovative packaging services Jen Brodsky mentioned in her interview would require the involvement of someone with a high level of skills in branding, design, and packaging development. This could however be outsourced to a branding and design agency, but that would add significant cost.

## Economic Scales

Investment (in the first 12-24 months ): Large: >\$500k (closer to 1 - 2 \$M)

Level of the economic impact on Perry County

Annual Revenue (within 24 months of start): Small, < \$1MM

Direct Employment (direct hire by this business): Small, <10

Number of Farm Enterprises Potentially Eligible: 75

## Potential Owners

Rising Springs Meat Company (<http://www.risingspringmeats.com/>)



## Third Tier Opportunities

There were four other opportunities that the committees considered that may also be viable would would require significant more research. For each we conducted preliminary research, which we share below for consideration.

## 1. Dairy Processing Facility - Value-Added Products

### Justification

In reference to the PA dairy processing study,<sup>18</sup> the study says two new plants in Pennsylvania for processing “other” cheeses—or non-American types, including Italian and specialty cheeses—could significantly reduce overall supply chain costs, enhance the marginal value of milk for producers, and create more than 1,000 jobs, while also adding \$1.5 billion in economic activity to the state.

### Research Findings

- Investments for plants is roughly \$433-\$598 million. A similar plant in Michigan, opening in 2020, is expected to employ 260 people directly and support an additional 600 indirect jobs.<sup>19</sup> It's central location in the state and being located in the second-highest dairy-producing county made it attractive. The project received significant support from the state. Took 10 years of pitching and planning to make it happen.
- In 2018 Perry County pitched to the Governor's Action Team (GAT) to have a 67 acre site be considered<sup>20</sup> for one of the two proposed new facilities inspired by the CDE study on increasing processing capacity. The effort was lead by Frank Campbell, Bill Roberts, PCED and Perry County Chamber of Commerce. This process has stalled out because of insufficient water supply in Perry County.
- These plants are huge users of municipal water and wastewater capacity, so there are few locations that can support them without upgrades to infrastructure. In addition, they require a tie into Natural Gas.
- Dairy co-ops are increasingly becoming investors in processing. Ex: Dairy Farmers of America (a co-op) is investing in plants<sup>21</sup> In the Michigan example above they are a 50% owner.

## 2. Support Existing Initiatives to Create a Local Farmers' Market

### Research Findings

- One market is found in Perry County which opened this summer in Landisburg. Has 3 vendors.<sup>22</sup>

<sup>18</sup> [https://dairymarkets.org/PA/Plant\\_Capacity.pdf](https://dairymarkets.org/PA/Plant_Capacity.pdf)

<sup>19</sup> <https://www.lansingstatejournal.com/story/news/2018/11/15/dairy-plant-glanbia-st-johns/1942404002/>

<sup>20</sup> [https://www.pennlive.com/perry-county-times/2018/05/business\\_group\\_offers\\_howe\\_sit.html](https://www.pennlive.com/perry-county-times/2018/05/business_group_offers_howe_sit.html)

<sup>21</sup> [https://www.lancasterfarming.com/farming/dairy/dairy-co-op-investing-in-processing-plants/article\\_5d24fe05-25e6-5941-baec-9e3afba32630.html](https://www.lancasterfarming.com/farming/dairy/dairy-co-op-investing-in-processing-plants/article_5d24fe05-25e6-5941-baec-9e3afba32630.html)

<sup>22</sup> <https://www.pennlive.com/perry-county-times/2019/07/landisburg-farm-market-off-to-slow-and-steady-pace.html>



## Research Findings

- There are two additional markets Marysville Farmers Market, & Shermans Dale Farmers' Market.
- The three markets are not listed in the USDA AMS directory and appear to not have a marketing presence outside of Facebook event pages.
- Farmers' Market success factors include direct-to-consumer supply and demand, variety, location, and community support- and most importantly completing a feasibility study. We recommend reading the market fundamentals from the Farmers' Market<sup>23</sup> Coalition.
- There are numerous funding opportunities for bolstering new or existing markets, including LFPP grants, FMPP grants, and small foundation grants.
- There are many state and national resources to help guide the management of a successful market.

## Other Considerations

- Does Perry County have enough existing DTC producers to engage in these markets? Only 12% of farmers who responded to the Perry County survey reported selling at a farmer's market.
- Direct-to-Consumer channels, such as Farmer's Markets, require a significant amount of marketing by both farmer and market to be successful.
- Fluctuating trends in consumer purchasing habits at farmer's markets pose potential barriers.

## 3. Farm Services - Business Planning, Succession Planning, Profitability Planning, and Marketing

### Concept

Develop a program to fund farm business consultants to work directly with farmers 1-on-1 and/or via group training workshops to help them with business planning, financial management, and marketing development.



<sup>23</sup> <http://farmersmarketcoalition.org/education/market-manager-faq/1-market-fundamentals/>



## Justification

Ranked low amongst farmer survey (see Appendix D) but is the building block of any successful business. Creating these programs in a way that interlaces them with other areas of operation may make them less intimidating to farmers and agricultural businesses.

## Research Findings

- Existing programs in PA:
  - Center for Dairy Excellence provides a suite of services for dairy farmers including business planning, financial analysis, and transition planning.<sup>24</sup>
  - Ag Choice/Farm Credit<sup>25</sup>
  - Ag Biz Masters<sup>26</sup> is an interactive learning series designed specifically for young and beginning farmers interested in honing their business and financial management skills. It is a two-year series where participants enroll in one year of the program at a time.
- Unsure of actual impacts, however completing AgBiz training helps new farmers garner favorable loan rates. VT Farm and Forest Viability Program (<https://vhcb.org/viability>) has seen success with their graduates seeing increases in their gross sales and profits.
- Program subsidized, the county manages the program, does not deliver it, acts as a matchmaker between farmer and service provider.
- While farmers do not rank this as a high priority is the bedrock of successful and sustainable farm businesses.

## 4. Educational School Programs to Get the Next Generation Excited about Agriculture

### Concept

Interest in Agricultural careers is declining, while demand increases. PCEDA has strong partnerships with local school districts and ongoing efforts to facilitate business skill growth. Create internship and learning opportunities for STEM growth and business and technical skill development (technology and engineering futures with basis in Ag) in county students through Ag lens, possibly hydroponics/other lab facility or placement at partner farms. PCEDO has strong relationships with 4 school districts, 3 of them have strong agricultural programs and have all have pushed for more career programs.

<sup>24</sup> <https://www.centerfordairyexcellence.org/programs-resources/transition-transformation-resources/>

<sup>25</sup> <https://www.agchoice.com/services/business-consulting>

<sup>26</sup> <http://www.agbizmasters.com/>

# Appendices

## Appendices

### A. Perry County's Agricultural Assets and Needs: Agricultural Reports Summary

#### Method

To gain a broad overview of the current state of Perry County agricultural products, sales mix and business outlook we compiled data from secondary sources such as the USDA Agricultural Census, other government records, and research publications from Penn State Extension. This birds eye view was further refined to smaller topical areas later in the research phase.

#### Results

##### ***Perry County - General Outlook<sup>1</sup>***

According to Perry County Economic Development Authority (PCEDA), 80% of land in the county is farmland, state parks, or recreational land that does not pay full taxes. The 20% of the remaining landowners pay the full assessment. While Perry County has a high quality of life, it is difficult to maintain robust public services and economic growth when the agricultural industry is lagging due to dairy commodity prices. PCEDA's hope is that by bolstering the agricultural sector, it will create a ripple effect throughout the local economy.

A 2017 Penn State Extension Business Retention and Extension report highlighted that 68% of businesses in Perry County plan to expand slightly or considerably over the next five years. The majority of employees of Perry County businesses reside within the county. Broadband and the reliability and speed of internet pose challenges to business growth, as they do in many of Pennsylvania's rural counties. In the list of suggestions to improve the economic climate in Perry County, businesses suggested developing tourism, establishing more downtown restaurants, minimizing regulations, collaborating with other businesses, and creating a buy local campaign.

##### ***USDA Agricultural Census County Level Data<sup>2</sup>***

Farmland makes up approximately 114,746 acres in the county, 6% of which is pastureland and 67% is cropland. The average farm according to the 2017 USDA

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<sup>1</sup> Source: Penn State Extension (2017), *Perry County Business Retention and Expansion Strategies Program*

<sup>2</sup> Source: U.S. Department of Agriculture (2017), *Census of Agriculture, Perry County*

census is 151 acres. 38% of the county's farms are less than 50 acres in size, while 36% are between 50-179 acres and 26% are larger than 180 acres.

### ***Perry County Agricultural Sales***

In terms of the market value of total goods sold, 82% was from livestock and 18% was from crop sales for a total of \$172.75 million in 2017, which marked a 23% million increase since 2012. The average market value of products sold per farm was \$227,500 annually, a 44% increase from 2012. The top four most lucrative commodities are poultry & eggs (\$54.75 million), milk from cows (\$40.18 million), hogs and pigs (\$28.17 million), and grains, oilseeds, dry beans, and dry peas (\$19.25 million). Sales are dominated by farms with \$100,000 or more in annual sales<sup>3</sup>.

## **B. Interviewing Farmers**

The Executive committee and board selected seven people who they considered significant in the agriculture community representing a range of farming operations. The rationale behind the interviews was to understand the agricultural landscape and culture of the Perry County ag community in a way that cannot be captured with simple statistics. Statistical data can tell us the “what”, but qualitative data such as interviews and survey comments can help us understand the “why”. Farmers were asked about the general makeup of their farms, products and sales channels. They were asked about their future plans and their own opinions on the state of agriculture in Perry County and what they perceived as strengths and potential problem areas. Further they were asked about their thoughts on conducting the farmer survey. Key themes that emerged included:

- Perry County has rich fertile soil and well suited for many types of agriculture.
- There is a strong sense of community and ability to rely on neighbors
- Distribution as a pinch point or difficult to pull off when considering selling to metro area markets.
- Concerns about farm expense outpacing product prices.
- Fear that small dairies will go extinct soon and that this 'fact' is too painful for folks to hear.
- Want to see dairy industry diversify in order to survive.
- Modern commodity markets are incredibly complex and no longer reflect just local or regional needs.

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<sup>3</sup> Source: U.S. Department of Agriculture (2017), *Census of Agriculture, Perry County*



## C. SWOT Analysis with Agricultural Committee

### Method

A SWOT analysis was facilitated in-person by members of the KTC team with six participants from the PCEDA Board. These board members include local business owners and farmers. SWOT stands for strengths, weaknesses, opportunities and threats. The purpose of this particular SWOT was to assess the board member perspectives about Perry County. This SWOT served a jumping off point to guide the remainder of the project priorities and broad focus areas. It was important that this exercise be undertaken with local members who best understand the day to day realities of life in Perry County.

### Results

#### **Strengths / Unique Advantages**

- Farm ground / soil (east → cattle, west → crops)
- Some areas → soy beans / row crops
- Location - next to Cumberland County
- Equal distant to NYC, DC, and Philly
- Near highways
- Less development pressures from heavy industry, limited natural gas, etc.
- Work ethic very good, → people love to hire Perry County employees

#### **Biggest Challenges / Weaknesses**

- Roads very windy → limit tractor trailer access
- 3 mountain and river border Perry Co.
- Generational transition (national issue)
- Financing/capital
- For Dairy farms who are in Co-ops (the majority) → contracts limit opportunities
- No option to get out of dairy contracts, single large customers limit freedom
- No control of dairy pricing, commodity = price takers

#### **Opportunities / Assets**

- 70% work force leave Perry Co. to work → could work here if pay was equal to “over the mountain”
- Raw milk
- Develop specialty business models (esp with dairy)

- Dairy → get better before you get bigger (e.g. Reduce herd size = increased quality and yield per head)
- Beef / Livestock → work directly with processor, share resources between farms

### Threats / Concerns

- Regulations
- For Dairy Farms in Coop - big risk to leave
- Many farmer have no plan post-retirement, including largest farms
- Family business dynamics
- PA -> ridiculous controls on prices (unless you find loop holes with raw, organic)

## D. Surveying Farmers

### Method

The Perry County Farmer Survey was designed by the team at Kitchen Table Consultants with input from key Perry County agriculture stakeholders, including farmers, as well as the Perry County Economic Development Authority (PCEDA). The purpose of the survey was to develop a holistic perspective of the current reality of Perry County farmers. Specifically we wanted to understand what farmers are doing, what they would like to do and where they have identified opportunities and areas for growth.

The survey was disseminated via project partners through email, social media and in person at Perry County agricultural events. The survey was available to the public from January 20, 2019 to March 31, 2019. A total of 108 primary operators participated in the survey. Those who self identified as not meeting the criteria of a farm operator were disqualified.

### Key Results

#### ***Farmer Respondents Demographics***

- Age: Over the age of 45 (67%)
- Veteran Status: (10%) are veterans
- Gender: Male (85%)
- Education: High school degree or equivalent (36%)
- Plain Community: 14%
- Farming Experience: (81%) 10+ years experience

The general demographic trend mirrored that of the most recently available USDA Ag census results for Perry County. Veteran status was asked specifically in order to understand how many Perry County farmers may be eligible for specific agricultural grant and loan assistance programs, both privately and through USDA that are specifically earmarked for encouraging veterans to enter farming and support them once they are established. Programs like the *Farmer Veteran Fellowship Fund*, that targets farmers or ranchers in their start up years can provide much needed financial assistance<sup>4</sup>. In this specific case all the respondents who identified as veterans also had more than 10 years experience in farming, meaning they would not qualify for the programs aimed at beginning veteran farmers. Programs aimed at veterans are often overlooked as they are relatively new.

In the demographic questions, it was not surprising to find that the majority (85%) of farmers are male. On a national level, female operators rose 27% over the last five years, especially in livestock production.<sup>5</sup> Like veterans, there are resources available to women farmers via grant programs and emerging training programs. They face a myriad of different issues and should be given weight in the development of programs and resources.

### ***Farm Products***

- 7 Most Popular Products in Perry County
  - 1) Hay (71%),
  - 2) Grains (54%)
  - 3) Corn (50%)
  - 4) Animals - Live for sale (35%)
  - 5) Dairy - Fluid milk (33%)
  - 6) Timber Products (21%)
  - 7) Poultry (19% )

The top seven categories are not surprising. They are also interrelated. Farmers were allowed to check any category that applied to them (meaning they could indicate all of the farm products they produced). For instance. If you are raising milk cows, you are generally also growing as much feed as possible (ie: grains & corn). When farmers are breeding dairy cows, they often inevitably end up culling some animals and taking some cows to the auction to be sold.

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<sup>4</sup> Farmvetco.org

<sup>5</sup>U.S. Department of Agriculture (2017), *Census of Agriculture*

### ***Farm Certifications***

Farmers were asked about many types of farm certifications they may hold, but the most popular Product or Farm Certifications were Animal Welfare Approved farms (63% of farms surveyed) and GAP Certified (25% of farms surveyed).

The National Sustainable Agriculture Coalition explains that the GAP (or Good Agricultural Practices) certification is a USDA audit program through which producers can demonstrate their compliance with food safety requirements to purchasers and retailers. Historically, GAP certification has been out of reach for many small and mid-sized farms and beginning and socially disadvantaged farmers because of the price. GroupGAP provides a long-awaited alternative option, wherein grower groups, farmer coops, and food collaboratives can share the certification cost by pooling together. Producers have typically sought GAP certification in order to access markets where such certification is required. Today, growers are under added market pressure to obtain food safety certifications because of the Food and Drug Administration (FDA)'s new food safety rules; established through the Food Safety Modernization Act (FSMA).<sup>6</sup>

### ***Farm Finances***

Some key findings from all of the Perry County farmers surveyed:

- 25% review their financial statements annually or sporadically
- 52% reported that their farm was profitable
- 24% chose the option of “rather not say” in regards to farm profitability
- 33% are relying solely on their farm business to support their households
- 50% generate the majority of their household income from farming
- 53% have annual sales over \$100,000 per year
- 40% do not use paid labor
- 10% have more than 10 employees (note that 90 unique farms answered this question with a total of 369 employees)
- 88% do NOT plan to hire more labor in the near future

This section of the survey provided some preliminary insight into areas where farmers may benefit from assistance. For example, the 25% who review their farms financial statements only annually or sporadically may indicate an opportunity to develop more farm finance training services.

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<sup>6</sup> NSAC, 2016: <http://sustainableagriculture.net/blog/groupgap-goes-nationwide/>.

The significant portion of respondents who selected “rather not say” in regards to their farms profitability may suggest that discussing farm finances is still a very taboo subject and any program developed to teach or train farmers in finance must take this reluctant mentality into consideration. Reluctance to openly discuss farm profitability, and money in general, is a barrier to having an honest discussion about the state of agriculture in a particular community. Breaking down barriers to this taboo is crucial for service providers, community leaders and farmers to tackle issues impacting their industry in a productive and realistic manner.

### ***Market Channels & Advertising***

Of the farmers surveyed:

- 68% do NOT sell directly to consumers
- Only 12% go to Farmers Markets and 4% do home delivery
- 10% sell directly to retailers
- Only 6% sell directly to restaurants
- 0% sell to institutions or schools.
- Over half (56%) do NOT use any type of promotion or advertising
- Only 13% have a website.

### ***Future Plans & Needs***

Of the farmers surveyed:

- 95% stated that they were somewhat or very confident they will still be farming in three years
- 70% do NOT have a written succession plan
- Top 3 short term plans:
  - Diversify the types of products you produce (42%)
  - Create or expand conservation practices on your farm (29%)
  - Create value-added products (26%)
- Top 3 Requested Types of Support:
  - Marketing Support
  - Education/Coaching
  - Regulatory Support
- 87% felt their farm was Somewhat - Very Successful
- How do Perry County farmers define success?



Keep enough success make living make animals good healthy able raise  
 farm equipment family living profit Paying bills work without crops

Overall, Perry County farmers seem positive about the future. The majority plan to still be farming and neither increase or decrease their time spent farming, showing a consistency that can provide the county's agricultural industry with some stability.

However, the general rising age of the areas farmers and a broad lack of succession planning is cause for concern and an area in immediate need of attention in order to preserve the agricultural sector in the long-term. Farmers showed a strong interest in focusing their short term goals on the some of the gaps identified earlier, entering direct sales, preserving the fertility of their land through increased conservation practices and diversifying product lines. This is an indicator that farmers may have already identified where the gaps might be in the agricultural market that they can organize their production and business goals around.

When asked an open ended question about what they would like in order to reach their goals, a clear pattern of 'marketing assistance' emerged. This included several aspects of marketing, from hands-on training in things like website development, to broader concepts like a PR campaign effort. One farmer responded to the question of what kind of support they needed with this statement:

*"[We need] public support for our farming practices. Put a face to our local farms. Let the public know all of the practices we have in place to produce a safe, wholesome product."* - Perry County Farmer

Farmers already mentioned that they do very little marketing of their own products. This is clearly an opportunity to provide farmers with training programs to help them become stronger marketers and understand the advantages and requirements to build a direct-to-consumer business. On the other hand, most farmers might agree with the sentiment that they just want to focus on farming.

When asked to define what "success" means to them, a desire to make money was mentioned most often with a caveat that they wanted to be able to make a profit but not at the expense of either the land (ie: depeleting soils), animal welfare or quality of life, particularly with their families. One respondent summed it up as, "*Raise healthy*

*beef, make decent hay, keep the soil healthy, etc. Get hay made in a timely manner, have no equipment break-downs."*

Farmers are sensitive that with their business comes a great responsibility to manage and steward the land and animals and provide a healthy product. Often it seems profitability is an afterthought and farming is seen as being mission driven. This way of thinking has both pros and cons. It emphasizes the passion that farmers bring to their profession, but financial stress can quickly deplete this. As one survey respondent commented, *"A lot of farmers have not been real profitable for some time but most continue to farm because it's more than a job, it's a lifestyle that is loved."*

### **Resources and Support**

Table 2: Responses to Question: *"Have you reached out to any of the following organizations/businesses for assistance with your operation in the past year? (check all that apply)"*

<b>Penn State Extension</b>	<b>65.28%</b>
<b>NRCS (Natural Resources Conservation Service)</b>	<b>43.06%</b>
<b>Local bank</b>	<b>40.28%</b>
Consultant through an ag-based business (equipment, seed, fertilizer, etc.)	33.33%
Agriculture lender	30.56%
Non-Profit focused on agriculture (Center for Dairy Excellence, PASA, PA Farm Link, etc.)	20.83%
Pennsylvania Department of Agriculture (PDA)	19.44%
Private business consultant	11.11%
Other Extension	6.94%
Co-op or commercial buyer who you work with (Perdue, Tuscarora Organic Growers Cooperative, etc.)	6.94%
Small Business Development Center (SBDC)	5.56%
Local government	5.56%
Other (please specify)	5.56%

Extension has been a trusted source for guidance on everything from business practices to production practices for generations. It is no surprise that this is the most popular resource. National Resources Conservation Service (NRCS) is also a popular resource. They offer quite a few popular grant and loan programs for conservation

efforts and infrastructure such as high tunnels and are the goto source for development of waste management programs for farmers (which livestock farmers must have). It is also important to note that farmers also rely on those they are purchasing from and selling too in order to get production advice. Ag-business consultants are not seen as a "trainer" in the ag world but they have a tremendous amount of impact and established clout with farmers. They should be considered when developing "train-the-trainer" programs.

*Table 3: Responses to Question: "If a new **program** were started in Perry County to support the region's agriculture, how important would it be that this program..."*

	Not Important	Somewhat Important	Neutral	Very Important	Extremely Important	Weighted Average
Create local jobs	6.02%	13.25%	26.51%	37.35%	16.87%	3.46
<b>Support agricultural exports from the region</b>	<b>3.53%</b>	<b>4.71%</b>	<b>21.18%</b>	<b>42.35%</b>	<b>28.24%</b>	<b>3.87</b>
Promote the agricultural products of the area with a public marketing campaign	4.82%	7.23%	28.92%	38.55%	20.48%	3.63
Offer business advice and guidance to help farmers stay profitable	5.95%	9.52%	22.62%	41.67%	20.24%	3.61
Provide direct one-on-one business coaching for farmers	8.33%	11.90%	39.29%	28.57%	11.90%	3.24
Offer educational programs to help farmers develop new sales channels	8.33%	10.71%	27.38%	42.86%	10.71%	3.37
Offer educational programs to help farmers with direct-to-consumer marketing	8.43%	8.43%	31.33%	36.14%	15.66%	3.42
Offer educational programs to help farmers with changing production practices to improve certifications and marketability	4.76%	14.29%	27.38%	41.67%	11.90%	3.42
Offer support for crisis situations (e.g. crisis	3.75%	8.75%	28.75%	42.50%	16.25%	3.59

intervention)						
<b>Educate county residents on the importance of purchasing local products</b>	<b>1.23%</b>	<b>7.41%</b>	<b>14.81%</b>	<b>43.21%</b>	<b>33.33%</b>	<b>4</b>
<b>Enhance and regenerate the natural resources (soil, waterways, forests)</b>	<b>2.44%</b>	<b>7.32%</b>	<b>24.39%</b>	<b>40.24%</b>	<b>25.61%</b>	<b>3.79</b>
Offer hands-on training in farming techniques and trends	6.10%	13.41%	39.02%	28.05%	13.41%	3.29

Top three identified program attributes were:

1. Educate county residence on local food products (marketing)
2. Support agricultural exports from the region (expanding markets), and
3. Protect and enhance natural resources.

*Table 4: Responses to Question: "If a new **facility** were started in Perry County to support the region's agriculture, how important would it be that this **facility**..."*

	Not Important	Somewhat Important	Neutral	Very Important	Extremely Important	Weighted Average
Attract tourists	24.42%	8.14%	43.02%	16.28%	8.14%	2.76
Offer hands-on training in farming techniques and trends	3.49%	18.60%	40.70%	27.91%	9.30%	3.21
Create local jobs	4.71%	12.94%	23.53%	42.35%	16.47%	3.53
Provide processing for value-added products	3.53%	9.41%	24.71%	43.53%	18.82%	3.65
<b>Support agricultural exports from the region</b>	<b>4.71%</b>	<b>8.24%</b>	<b>18.82%</b>	<b>48.24%</b>	<b>20.00%</b>	<b>3.71</b>
<b>Provide distribution of agricultural products</b>	<b>3.57%</b>	<b>8.33%</b>	<b>17.86%</b>	<b>52.38%</b>	<b>17.86%</b>	<b>3.73</b>
<b>Support private sector development of processing facilities (slaughterhouse, value-added dairy, value-added foods, etc)</b>	<b>2.38%</b>	<b>9.52%</b>	<b>22.62%</b>	<b>42.86%</b>	<b>22.62%</b>	<b>3.74</b>



Top three facility attributes were:

1. Support private sector development of processing facilities
2. Provide distribution of agricultural products, and
3. Support agricultural exports from the region [a cross over from the previous question.]

The least important attribute was that it attract tourists. When Plain community respondents were analyzed this ranked even lower. There is concern that agritourism would create more of a headache to area farmers than the potential benefits it might generate.

### ***Farmer Identified Opportunities***

When asked "Do you think there are any agricultural opportunities that Perry County should be pursuing but may not be? If so, what opportunities do you see for the county?" farmers again called for marketing assistance in several forms. One farmer reiterated the need for someone else to be in charge of a marketing campaign saying, *"Develop an entity that will market the products for the farmer, not educating farmers how to market. If we wanted to market our products, we would, but we don't have the time or energy to be salespeople."*

Farmers also identified a need for meat and poultry processing facilities, and opportunities to transition to grass based farming practices. A respondent said *"Investing in grass based livestock production would be a major paradigm shift and give this county unsurpassed regional brand identification"*. It is of note that a few folks did express interest in agricultural production of both hemp and medical marijuana. The latter is out of reach for the average farmer (applications alone can exceed \$200k), but hemp shows great promise for Pennsylvania farmers.

## **E. Local Food Infrastructure: Processors, Farmers' Markets, Distribution Centers, and Co-Packers**

### ***Animal Processing***

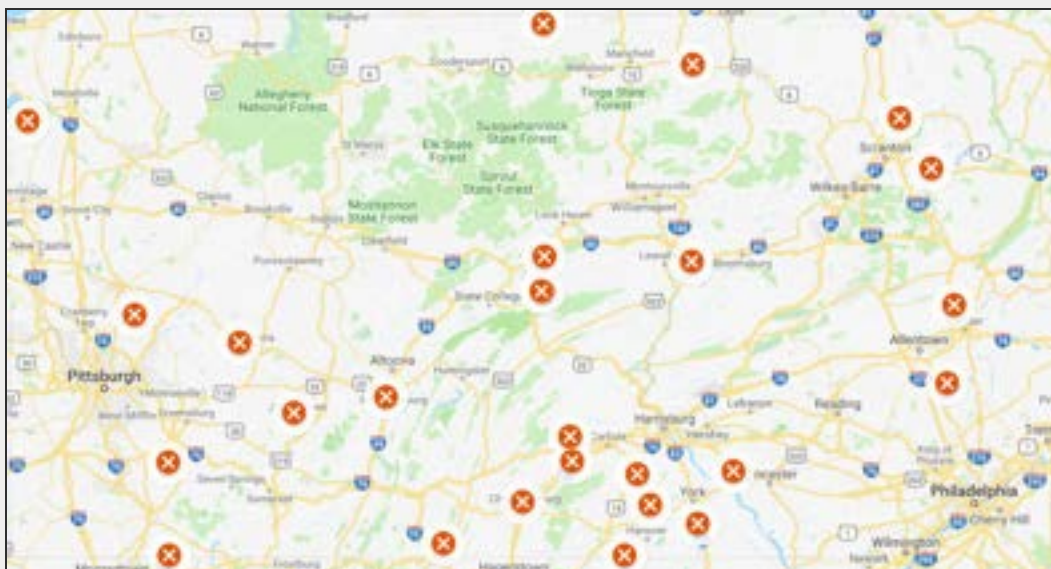
Access to high quality USDA inspected animal processing facilities is a vital piece of the supply chain when farmers and other food suppliers are trying to move protein in a timely manner. USDA inspected meat processors are often found to be working at or near capacity creating scheduling challenges. At first glance their appears to be an

enormous amount of capacity in Pennsylvania; however this is misleading as many of these facilities are licensed for the advantage of only serving themselves (i.e. all-in-one butchers with on-site retail stores and a company branded wholesale wing), or larger corporate facilities that serve one specific company and the farmers who are contracted to them (e.g. JBS). This is not a clear representation of resources available to independent livestock producers.

Out of the 75 facilities that offer both processing and slaughter, only 28 actually offer services to individual farmers who could in turn direct-market their products (the map below shows where these facilities are located in relation to Perry County). 27 facilities were confirmed to not offer their services to individuals outside their company, and 20 facilities were left unconfirmed because either no information was available as to the type and extent of the services provided or the information provided was unclear if they were still in operation.

Of the 21 facilities that offer poultry slaughter and processing, there appears to be only 5 that serve independent producers<sup>7</sup>. Considering that one of Perry County's top agricultural products is livestock and pork products, the distance and capacity issues of existing processing facilities poses a significant barrier to moving product efficiently both within the county and beyond.

Image: *Location of Livestock Processing Facilities in PA Serving Independent Farmers*



<sup>7</sup> U.S Department of Agriculture Food Safety and Inspection Service (2019), *Meat, Poultry and Egg Product Inspection Directory*

***Distribution***

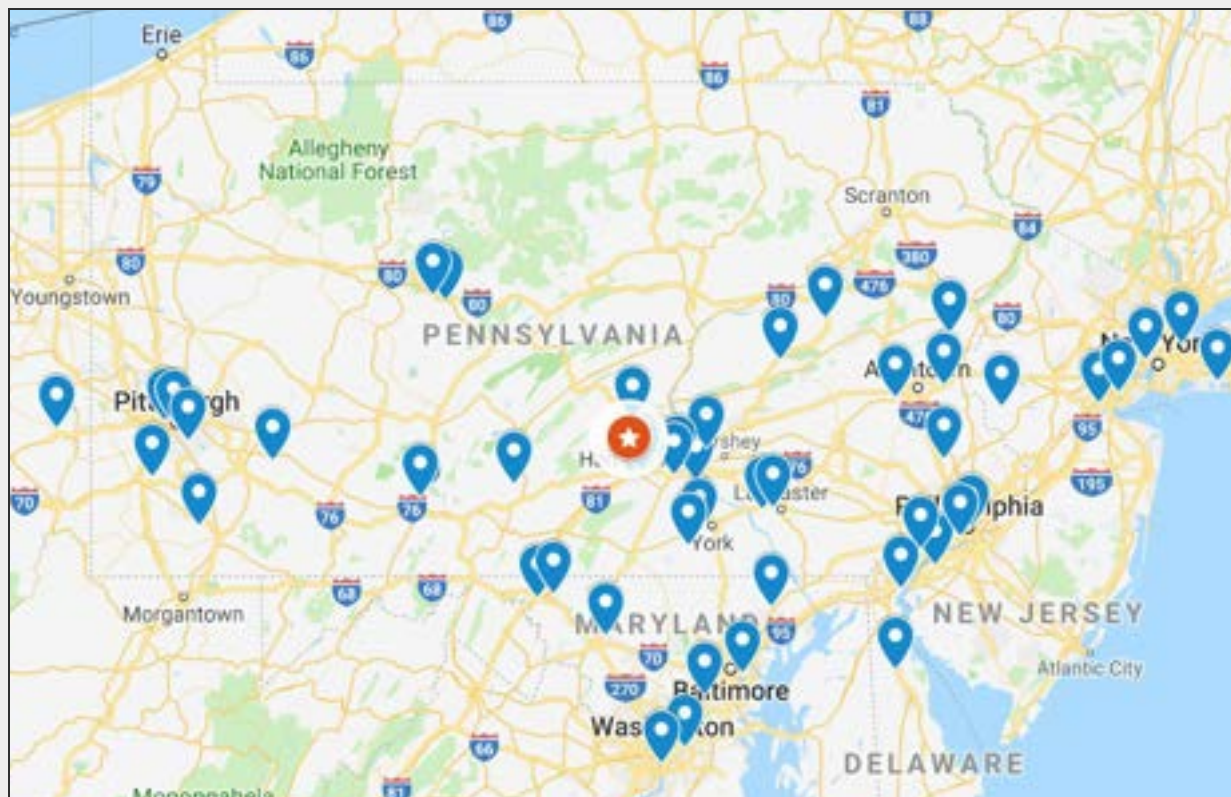
There are no distribution centers (DCs) within Perry County or the immediate adjacent counties. The closest DCs are in the Harrisburg-Hershey and York areas and consist of DCs owned and operated by private companies, such as Acme, Target, Amazon and Hain Celestial.

However, there are numerous distribution centers located within 200 miles of Perry County, both company-owned such as those mentioned above, as well as DCs that specialize in warehousing, wholesaling and logistics for food products. There are options that specialize in non-perishable items, perishable goods, produce, natural/organic and conventional products. What is still unknown is whether or not these general DCs are at capacity or not, but presumably these networks serve retail outlets within Perry County. There are no aggregators in the immediate Perry County area, but several aggregation facilities and food hubs that offer value-add services or collection of goods from multiple sources exist within 100-200 miles. Some facilities focus on natural/organic or kosher products.

These services include but are not limited to:

- Clean, mill, pack, and private-label seeds & grains into bulk, foodservice, and retail bags (Onset Worldwide (<https://onsetworldwide.com/>) in Frenchtown, NJ)
- Co-packing for non-perishable items (Canopy Foods (<https://canopyfoods.com/>) in Downingtown, PA) and Indian products (Palace Foods in Reading, PA)
- Dairy production, processing and co-packing (Trickling Springs Creamery (<https://tricklingspringscreamery.com/>) in Chambersburg, PA)

Image: Map of DCs, Aggregators and Food Hubs in 200 mile radius of Perry County



Generally speaking, there are not enough co-packing, manufacturing and processing facilities to meet the demand of all of the food-related products and businesses in the Mid-Atlantic region. Many of those in existence are near capacity or only specialize in niche services. In particular, there are fewer facilities that are able to accommodate new and small food businesses, those that have specialized needs or highly perishable items such as refrigerated and frozen products.

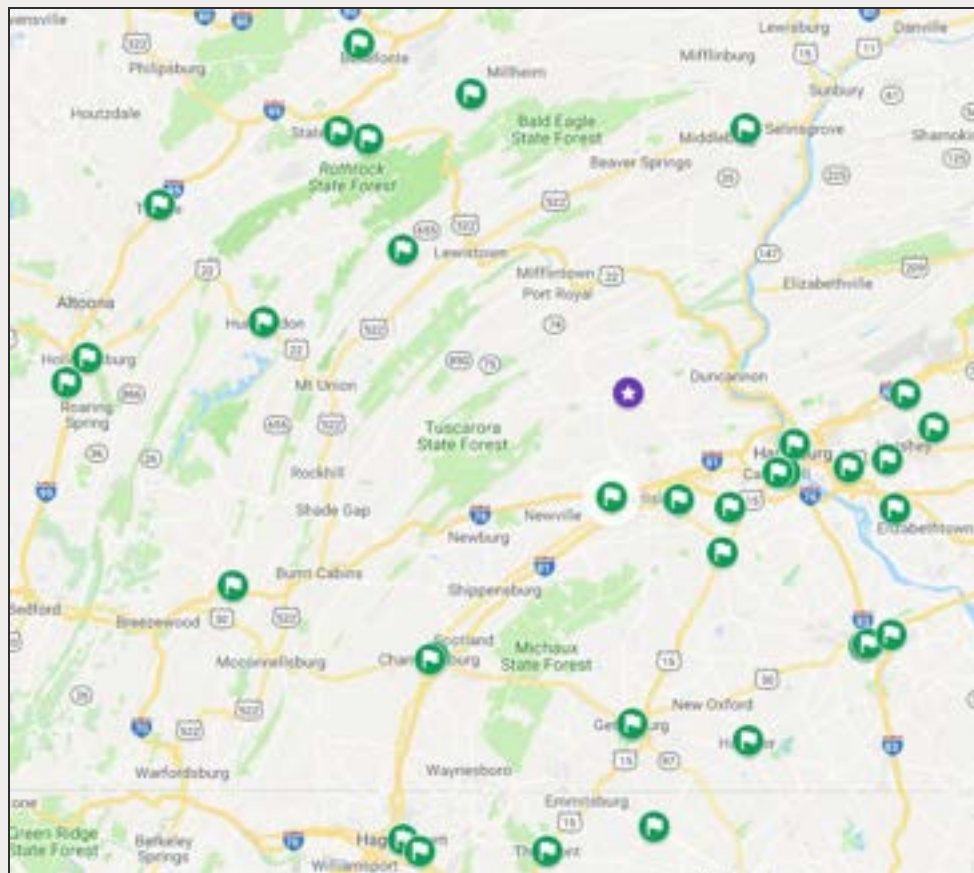
### ***A Focus on Farmers Markets & On-Farm Stores***

Farmers markets offer farmers and other producers one of the most robust ways to direct market their products to consumers. The USDA Agricultural Marketing Service keeps an up to date list of all farmers markets in the country. This database did not yield any results for markets located within Perry County; yet since the beginning of this project three small markets (one has only 2 vendors) have started, which are listed on Facebook . There are 55 markets in a 50 miles radius (see image below). Only 11.69% of farmers who participated in the Perry County survey reported selling at a



farmers market. We presume that they are leaving the county and selling in other area farmers markets.

Image: *Location of Farmers' Markets in a 50 Mile Radius of Perry County*



A slightly larger portion of farmers (16.88%) reported they use on-farm stores or stands to direct market their products. Considering that Pennsylvania is ranked number three in direct sales Perry County itself does not seem to be following this trend<sup>8</sup>. 67.5% of farmers did not report using any direct sales channels. Perhaps a barrier to this may be marketing. Direct sales can put a large part of marketing products on the producer; 56.04% of farmers told us that they do not engage in any kind of marketing. Another hurdle may be purely geographic. The USDA AMS found that “The majority (53%) of farms marketing food directly were located in metropolitan counties, and two thirds (67%) of direct food sales were from farms located in

<sup>8</sup> U.S Department of Agriculture (2016), *Direct Farm Sales of Food Results from the 2015 Local Food Marketing Practices Survey*

metropolitan counties. More than 80 percent of farms selling food directly sold all of their directly marketed food within a 100-mile radius of the farm”.

## F. Pennsylvania Local Food Consumer Trends

Food trends are most affected by consumers tastes in cooking and restaurant/eating out experiences which vary due to lifestyle choices and factors, which makes it difficult to generalize trends across an entire county. However, we also know that Perry County’s demographics skew towards a more rural, agricultural population with a large Amish and/or Mennonite population, so in general, we can assume that they tend to cook more at home than eat out, and are less influenced by the latest or most recent trends. When choosing where they want to eat out they are more driven by attributes of convenience, value and comfort.

Many food trends begin in New York or Los Angeles and then expand into other parts of the country a few months later, primarily in larger cities first. Rural areas, like in Central Pennsylvania, tend to see new food trends emerge two or more years after they have become popularized in larger food-centric cities, or not at all. However, because of Perry County’s proximity to larger metropolitan areas that give rise to and quickly adopt new food trends (such as NYC-Philadelphia-Washington, DC), Perry County is well-positioned to provide products and services to serve the unmet demands of consumers in these areas.

We evaluated several restaurant and food association reports to identify emerging trends in the restaurant and retail food sales. The following trends were identified as either trends that are more likely for Perry County/Central PA residents to engage in or trends that represent big opportunities regionally and nationally. We chose to highlight trends that both present opportunities for Perry County and are attainable within the products already being produced or that farmers have shown interest in engaging in via the farmer survey (such as hemp production or barley production for spirits).

It’s important to note is that while many additional trends and opportunities exist, they would not make sense for Perry County to consider due to geographic constraints. For example, avocados will continue to be an in-demand product across the US for the foreseeable future, but cannot be successfully grown here.

National, Regional and Local Food Trends for Perry County to Consider:

- Plant-based everything - from food products (dairy and meat alternatives such as oat milk, beyond meat burger) to packaging and cutlery
- Zero-waste cooking (elevated cuisine using food scraps/nose-to-tail, root-to-leaf)
- Locally grown and milled grains - for craft/artisan beer and spirits, pasta and baked goods
- Hemp/CBD-infused food and other products (oils, body care)
- Slow-cooking and old fashioned techniques, such as rotisserie, smoking, curing, highlighting traditional regional or ethnic cuisine (e.g. Peruvian, Pennsy-Dutch)
- Healthful, colorful foods and clean ingredients

## G. The Process of Uncovering and Assessing Agricultural Opportunities

### Forage

#### **Overview**

As we built our foundational understanding of Perry County's agricultural landscape, the perspectives of local farmers, and the agricultural infrastructure surrounding the county, we kept a running list of potential facilities and programs that could potentially be viable in Perry County. As we moved into this opportunity assessment phase, we also added several other opportunities to the list based on our understanding gained in the first two parts of this project.

**Purpose:** To uncover and brainstorm as many potentially good ideas from the community for future analysis.

**Process:** Interview farmers, conduct farmer surveys, ask community members, gather input from subject matter experts, create a list, add to the list based on research and experience.

**Start:** 0 opportunities

**Criteria:** Any and all ideas that seem reasonable for Perry County.

**Outcome:** 37 potential programs and facilities

The Opportunities:

#### **Programs:**

1. Perry County Recruitment into PASA Dairy Grazing Apprenticeship
2. Investment in meat processing training
3. Leverage resources at the state level from the Center for Dairy Excellence
4. Services to help farms with business planning, profitability planning

5. Program to assist with succession planning
6. Shared marketing program to help farmers market direct to consumer
7. A marketing campaign to re-brand "ag" and trades to make young people want to do them more
8. Develop STEM opportunities (post-secondary school, training, internships, camps, etc) for students to learn about farming and future opportunities
9. A marketing program for Perry County Grown
10. Public relations project to highlight farms, as members of the local business community
11. Services to help farms with individual marketing
12. A marketing campaign for Perry County Grain Campaign (for products with X% of Perry County grown grain)
13. Pursuing a specific contract for a group of farmers (e.g. Costco), create a holding facility in Perry County for Costco milk. Private Label to WaWa, Amazon, etc.
14. Program to help dairy producers re-purpose to beef operations
15. Program to help dairy producers re-purpose to pork operations
16. Program to help farmers transition from dairy to pork production (higher end, not contract)
17. Hemp Farming training program
18. Farmer Meat Cooperative and Brand
19. Food distributor/aggregator
20. Transition to organic feed production and become a contract grower for Bell and Evans
21. Regionally Focused Wholesale Distributor
22. Create transitional opportunities for prisoners to learn emerging ag (ex. hydroponics) and create produce for seniors, schools, prisons, food banks, etc.

#### Facilities:

1. National e-Commerce Company, Direct-to-Consumer Retail
2. Regionally Focused E-Commerce Company, Direct-to-Consumer Retail
3. Local Farmers' Market
4. Dairy Processing Facility - Fluid Milk
5. Dairy Processing Facility - Value-Added Products
6. Standard Slaughter-Facility and Cutting Floor
7. Poultry Slaughter and Processing



8. Local Retail Food Market to improve food access
9. Grain hub for beer/whiskey producers (malt, barley, etc.)
10. Malt House to support PA breweries and distilleries
11. Value-Added Processor
12. Local Meat Food Truck / Eatery Restaurant
13. Local Dairy Co-op owning a processing facility
14. Hemp Processing Facility
15. Ag themed destination facility

### Crowd think

**Overview:** This stage allowed the agricultural committee and the broader team at Kitchen Table Consultants to quickly assess each of these 37 opportunities in order to narrow the focus on the top 9 opportunities.

**Purpose:** Since it would not be practical to research all 37 programs and facilities, we used the group's collective knowledge, experience, and gut instincts to quickly narrow the field to a reasonable number of opportunities that could be more deeply assessed.

**Process:** The Agricultural Committee and the team at Kitchen Table Consultants scored all of the opportunities using the following criteria in order to develop an average score for each opportunity. Using these scores, we ranked the opportunities and moved the Top 9 opportunities into the next phase of the process. We also determined that some of the opportunities originally listed were more of resources that could be leveraged by farmers. Since these resources that did not require further research, we moved them into the Farmer Resources section of this plan.

**Start:** 37 possible programs and facilities →

**Criteria:** Likelihood to help farmers, likelihood to be viable, likelihood to find a driver to help execute on the idea.

**Outcome:** 12 good opportunities with some details, justification, and next research steps.

### The Opportunities

#### **Programs and Facilities:**

##### **1. Program to Assist with Succession Planning.**

- a. **Details:** Develop a program to fund farm business consultants, legal and tax specialists to work directly with farmers 1-on-1 and/or via group training workshops to help them develop succession plans to pass the

farm (business and land) to the next generation in the most strategic manner.

- b. **Justification:** Farmer survey indicated that 69% of farmers do NOT have any type of written succession plan + 54% of primary farm operators are 55 years of age or older.
- c. **Next Research Steps:**
  - i. Review comps and success rates of other similar programs.
  - ii. Interview contact in VT about a similar program.
  - iii. Ask project partners about existing programs available in PA

## 2. Hemp Farming Training Program

- a. **Details:** Through the 2018 Farm Bill, the federal government has changed the legal status of industrial hemp. It has been removed from regulation under the Controlled Substance Act, ending any restrictions on import or interstate movement of hemp seed, plants, or products. However, the 2018 Farm Bill still requires that every site where industrial hemp is grown be registered with the state or federal government under a program with requirements for inspection and testing.
- b. **Justification:** The PA Department of Agriculture has formulated a growing program that includes a mandatory permitting and monitoring program. The application period to grow this year has already passed. Farmers must learn about how to enter into hemp growing legally and the best practices for managing hemp production.
- c. **Next Research Steps:**
  - i. Interview Marti and Bill about the opportunity
  - ii. Research any existing training programs (in PA or elsewhere)

## 3. Program to help farmers transition to organic feed production and become a contract grower for Bell and Evans or other emerging farmer-focused brands.

- a. **Justification:** Bell & Evans purchases 70,000 bushels of organic corn and 50,000 bushels of organic soybeans from Minnesota every week. They project that they could purchase the supply in PA if everyone switched to organic feed production and yet still would need to buy from Minnesota. They are under rapid growth but are no longer looking to recruit farmers. (source: Lancaster Farming, 2.8.19) They receive about 200 inquiries a day for those looking to grow. Their primary need is with organic feed production.

**b. Next Research Steps:**

- i. Interview Regional Processors about opportunities for farmers to convert to Organic.
- ii. Interview local organic certifiers about time and cost to convert to organic.
- iii. Interview emerging brands about their feed protocols and the likelihood of contracting with Perry county farmers.

ÑB **Regionally Focused E-commerce Company, Direct-to-Consumer Retail.**

- a. **Details:** Create a regional e-commerce business that buys locally raised meats and sells them locally via Direct-to-Consumer marketing with a focus on subscription sales. This model would buy from farmers who raise animals to a set of standards that would create a product line to meet the needs of consumers sold under one brand with a specific set of marketing claims (ex: Perry County raised and/or 100% Animal Welfare Approved). Sales of these products would occur online through subscription service of certain products or pay-as-you-go orders. "Perry County Box" (own brand or connect with an existing company)
- b. **Justification:** National trend, but the regional focus would increase marketability and decrease distribution costs.
- c. **Next Research Steps:**
  - i. Research existing regional e-commerce brands serving major regional urban markets.
  - ii. Interview regional brands about the possibility of sourcing from Perry County farms or creating a Perry County specific off-shoot of an existing operation.

ÑB **Dairy Processing Facility - Value-Added Products.**

- a. **Justification:** See PA dairy processing study: In short, the study says two new plants in Pennsylvania for processing "other" cheeses—or non-American types, including Italian and specialty cheeses—could significantly reduce overall supply chain costs, enhance the marginal value of milk for producers, and create more than 1,000 jobs, while also adding \$1.5 billion in economic activity to the state.
- b. **Next Research Steps:**
  - i. Interview operators of comparable organizations in other geographies. What are the key elements of success?

- ii. Understand investment costs and potential economic impact on Perry County.

ÑB **Grain hub for beer/whisky producers (hops, barley, etc.).**

- a. **Justification:** NY state demonstrated the need for such facilities in 2015 followed by a feasibility study in 2017 by Livingston county. PA has a comparable micro/craft brew industry. In order to supply even small breweries or distilleries with raw local/regional ingredients, there needs to be an aggregation point. Very few farms are scaled to offer the total supply to these businesses directly. Providing these raw ingredients would create truly local value-added products.
- b. **Next Research Steps:**
  - i. Review data regarding the number of grain farmers in Perry County
  - ii. Find a comparable organization. Interview operator to understand the business model and key factors of success.
  - iii. Review of NY Study

7. **Malt House to support PA breweries and distilleries**

- a. **Justification:** Local and regional spirits are still purchasing malted grains from large companies. Models of repurposing dairy processing equipment for malting has been successfully demonstrated in other areas. There is still plenty of room in PA for small malthouses. There are less than 5 now. Malthouses offer contracts to area farmers to grow malting barley, not to be confused with feed-grade barley.
- b. **Next Research Steps:**
  - i. Interview industry source about key success factors, feasibility in Perry County and potential involvement as a driver
  - ii. Review KTC's research on Malt Houses in West Virginia

ÑB **Value-Added Meat Processor.**

- a. **Details:** Create a value-added processor with services that are not existing in the area. This facility would receive a raw product that changes form onsite via further processing. This processor would serve an existing demand for meat processing in the region, provide additional product opportunities or local farmer/producers, and create new local products and therefore marketing opportunities. Improved value-added products would be manufactured using smoking, cooking, dry aging,

fermenting, curing, slicing, and packaging of high end or novelty products not currently produced locally.

**b. Next Research Steps:**

- i. Review KTC's Beefing Up the Economy study for comps.
- ii. Interview at least one comp about key success factors and advice for finding a driver.

**OB Hemp Processing Facility.**

a. **Justification:** Processing capacity for the entirety of hemp plants is currently lacking. Processors for CBD do exist but there is a lack of facilities to process the stalk into fiber, leading to waste. Only one such complete facility is open in PA (York Co.) with the capacity to process 5,000 acres of hemp/yr and employs 20 people.

**b. Next Research Steps:**

- i. Interview Marti and Bill about the feasibility and initial research questions.
- ii. Interview facility in York Co about capacity and potential to add an additional location in Perry Co.

**10. Local Farmers' Market**

**KB Justification:** There are no markets in Perry County. Current direct-to-consumer farmers are leaving the county to attend other markets. However, only a small subset of Perry County farmers are engaged at farmers' markets (less than 15%).

**b. Next Research Questions:**

- i. Supply research: If Perry county supported a local farmers market would there be enough farmer interest to support a robust market? Very few farmers are selling their products in this manner currently.
- ii. Consumer research: Is there enough local interest in purchasing food this way?

**11. Services to help farms with business planning, profitability planning, and marketing.**

a. **Details:** Develop a program to fund farm business consultants to work directly with farmers 1-on-1 and/or via group training workshops to help them with business planning, financial management, and marketing development



- b. **Justification:** Ranked low amongst farmer survey but is the building block of any successful business. Creating these programs in a way that interlaces them with other areas of operation may make them less intimidating to farmers and ag businesses.

## 12. Education programs in schools to get the next generation excited about Agriculture

- a. **Justification:** Interest in Ag careers is declining, while demand increases. PCEDA has a strong partnership with local school districts and ongoing effort to facilitate business skill growth.
- b. **Details:** Create internship and learning opportunities for STEM growth and business skill development in county students through Ag lense, possibly hydroponics/other lab facility or placement at partner farms.

### Swap

**Overview:** This stage allowed the Executive and Agricultural committees to assess the top 12 opportunities (based on initial scoring) and confirm they were the best opportunities and determine which nine to invest time into further research.

**Purpose:** To engage the group in meaningful dialogue about each of the Top 12 opportunities and narrow to 9 opportunities, in which to have KTC conduct additional research.

**Process:** Review the final 12 one at a time and determine if they should continue to the next stage, be replaced with another opportunity from the original 37, or be eliminated - based on the Agricultural Committee's judgment and criteria.

**Start:** 12 opportunities

**Criteria:** Democratic debate and voting among committee

**Outcome:** Nine good opportunities that the stakeholder group agrees are the best so that the KTC team can continue to research the top nine in order to prepare for the Thinning stage.

### **The Opportunities**

1. Regionally Focused E-commerce Company, Direct-to-Consumer Retail
2. Dairy Processing Facility - Value-Added Products
3. Grain hub for beer/whiskey producers (hops, barley, etc.)
4. Malt House to support PA breweries and distilleries
5. Value-Added Meat Processor.

6. Hemp Processing Facility.
7. Support Existing Initiatives to Create a Local Farmers' Market
8. Services to help farms with business planning, succession planning, profitability planning, and marketing.
9. Education programs in schools to get the next generation excited about Agriculture

### Thinning

**Overview:** This stage began with KTC conducting additional research on all top nine opportunities. We then presented this research to the Agricultural Committee and facilitated a discussion and ultimately voted on the top five opportunities to move into the next stage of research.

**Purpose:** To use data and research to conduct a more thoughtful thinning of the top 9 opportunities in order to further focus the ongoing research.

**Process:** Research and present information in a concise and consistent manner to inform and empower the committee to select the top five opportunities using the Thinning criteria.

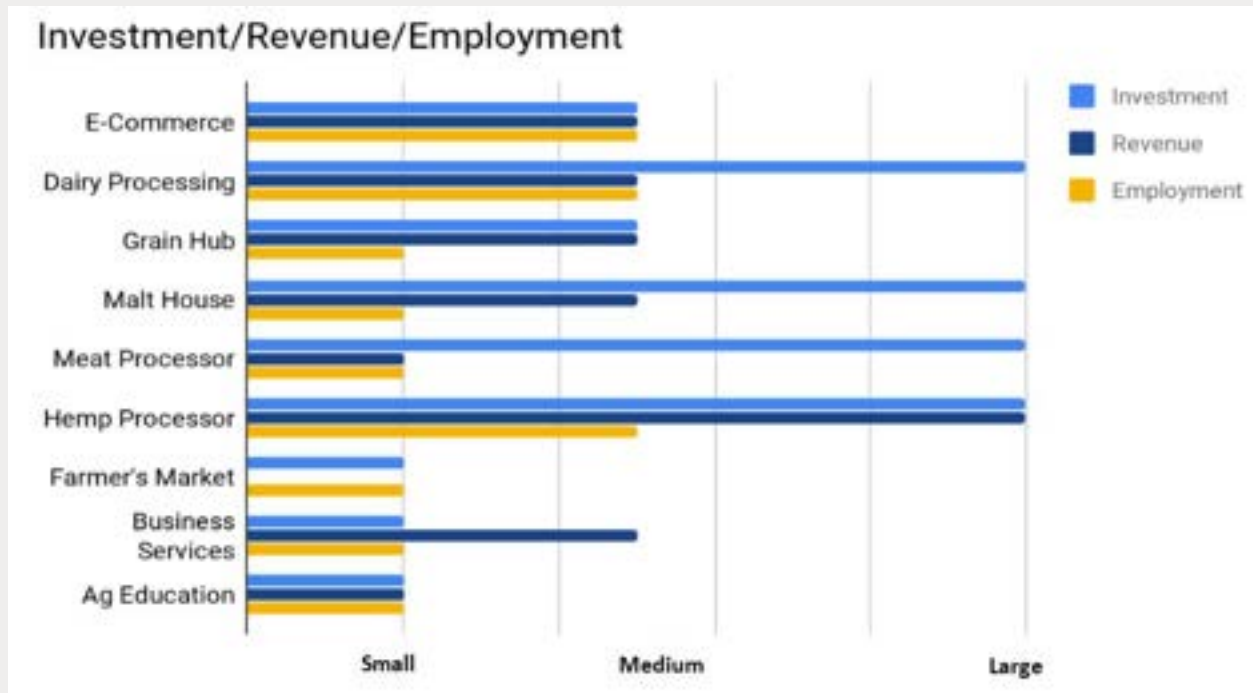
**Start:** 9 opportunities

**Criteria:** the size of the investment, level of economic impact, presence of a driver or owner.

**Outcome:** 5 GREAT opportunities that have been vetted by the group and with focused market and industry research.

**Opportunities and Research:** Provided in the main report

### **Comparison of Opportunities**



### Category Key

- **Investment** (in the first 12-24 months )
  - Small: < \$100k,
  - Medium: 100k to \$500k
  - Large: >\$500k
- *Level of the economic impact on Perry County*
  - **Direct Employment** (direct hire by this business)
    - Small <10
    - Medium 11-50
    - Large >51
  - **Annual Revenue** (within 24 months of start)
    - Small < \$1MM
    - Medium \$1MM to \$5MM,
    - Large > \$5MM

### Top Five Opportunities Selected in Thinning Session:

1. Regionally Focused E-commerce Company, Direct-to-Consumer Retail
2. Grain hub for beer/whiskey producers (hops, barley, etc.)
3. Malt House to support PA breweries and distilleries
4. Value-Added Meat Processor
5. Hemp Processing Facility

## Growing

**Overview:** This stage was where KTC did a much deeper research dive into these top five opportunities. This research was intended to help the Agricultural Committee narrow down the focus even further to the top three most compelling opportunities. It's important to note however that the research presented in the stage should be considered even if the opportunity did not make it through to the top three.

**Purpose:** Ensure buy-in on the final selection of strategic focus for regional economic development. Build the capacity of the Agricultural Committee to be able to rally the community behind the final opportunities.

**Process:** Conduct in-depth secondary and primary research (interviews) relating to the top five opportunities. Send this research report along with a one-question poll to the Agricultural Committee and the full board of the Perry County Economic Development Authority. Each member of the board and the committee ranked the opportunities from most to least compelling. The results of this poll led to the selection of the top three opportunities, in which we've developed a mini business plan.

**Start:** 5

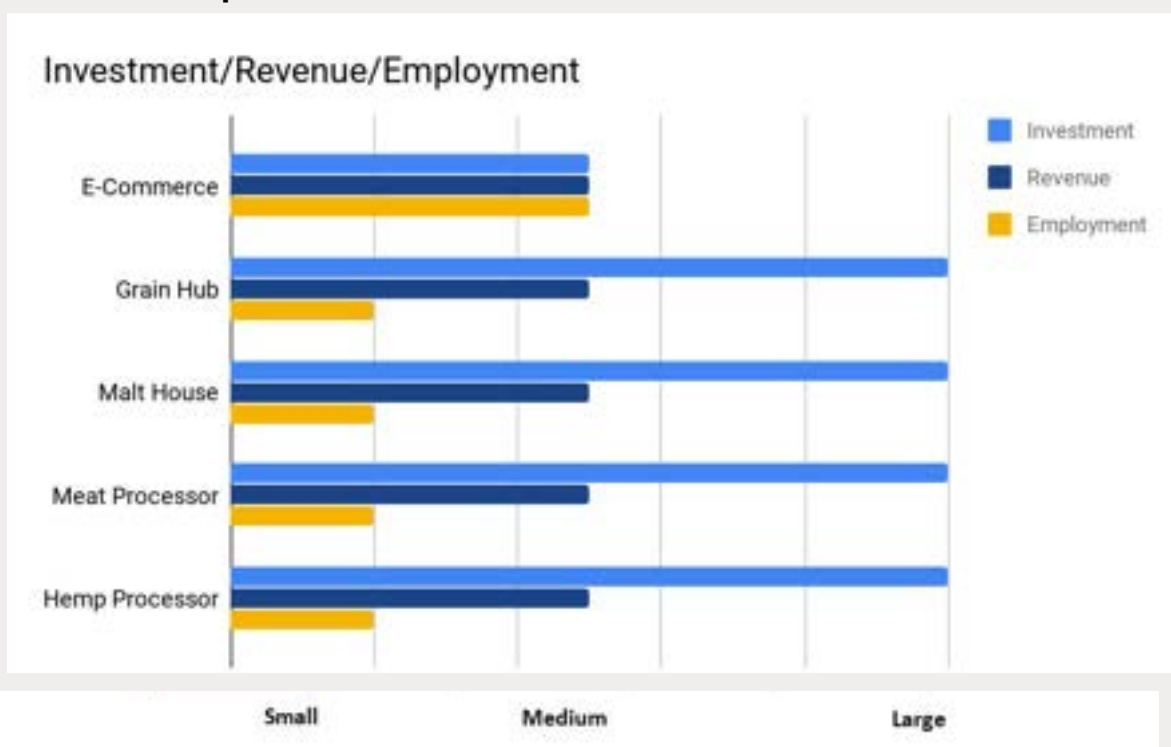
**Criteria:** Presence of an OWNER, Financeable, Sustainable

**Outcome:** 3 mini business plans with identified owners, as part of the Agricultural Development Plan

### **Opportunities and Research:**

Provided in the main report.

## Economic Scale Comparison



- **Investment** (in the first 12-24 months )
  - Small: < \$100k,
  - Medium: 100k to \$500k
  - Large: >\$500k

### *Level of the economic impact on Perry County*

- **Direct Employment** (direct hire by this business)
  - Small <10
  - Medium 11-50
  - Large >51
- **Annual Revenue** (within 24 months of start)
  - Small < \$1MM
  - Medium \$1MM to \$5MM,
  - Large > \$5MM

The research from the Growing phase was shared with the Agricultural Committee and ranked by favorability in a one-question online poll. The full board of the PCEDA also received this report and took this poll. The results were weighted 65% weight to the



Agricultural Committee and 35% to the board's results. These weighted results led to the selection of the Top 3 Opportunities presented in this plan.

### Harvest

**Purpose:** To summarize and document all strategies in a cohesive, well-organized report.

**Process:** Outlines top agricultural development opportunities, make recommendations for specific programs, facilities, or organizations to support these regional initiatives. Include recommendations for stages of growth, funding required and provide the underlying financial models, research data, and opportunity scoring tools used in the project. Include both long-term regional strategies (5 - 10 years), and detailed and actionable implementation plans for short-term (1-2 year) and mid-term (3+ year).

**Outcome:** A cohesive and actionable agricultural plan.

### Marketing

(Beyond the scope of this project)

#### **Purpose:**

1. To select the final opportunity to pursue with an LFPP implementation grant.
2. Develop and execute on a PR and Communications plan to promote the opportunities and further build community buy-in.
3. To ensure the Ag Committee has all of the tools they need to succeed in marketing the opportunities strategically.

**Process:** The Ag Committee will meet to assess the final three business plans and Identify an owner for each one, engage that owner and then determine the one primary opportunity in which to focus on for a follow-up LFPP implementation grant.

**Start:** 3

**Criteria:** OWNER, Financeable, Sustainable.

**Outcome:** 1

## H. About Kitchen Table Consultants

Our goal is simple – *to help passionate farmers and food artisans build lasting, profitable, locally-focused businesses.* We accomplish this by working alongside our clients. No stuffy business plans that get thrown on the shelf, never to be looked at again. We have real-world experience and bring that to our work every day. We have walked a mile in your shoes and understand first-hand the challenges facing small businesses. We are results-oriented, and our work is about actionable steps to make your business stronger and more profitable.

The foundation of our firm was built on the work of our co-founder Ted's solo consulting service. He had been providing meaningful, hands on advising services to small businesses across a number of sectors since 2009. When Jen and Ted met and began working together, they developed and launched Kitchen Table Consultants to serve the needs of the food and farming community. KTC is a collective of entrepreneurs passionate about local food systems and small businesses. We know firsthand what it is like to be kept up a night trying to solve a problem, save a business, stay afloat. We are guided by the core principle of adding more value to our client's organization than we cost, it's that simple. This is what drives us. The KTC team is dedicated to our clients, we take our work very seriously, and know that people place their trust in us and see our work as an investment in their future. That's what keeps us up at night. But we also don't take ourselves too seriously, and a part of the joy we take in our work is the relationships we build with clients around their kitchen table, and the well deserved laughter and camaraderie we share after a hard days work.

### Project Team:

Project Leads: Ted LeBow & Jen Brodsky

Project Manager: Noah Munro

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For Questions about this report direct your comments to:

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