

# Mapping the Agricultural Assets of Cocke County, Tennessee

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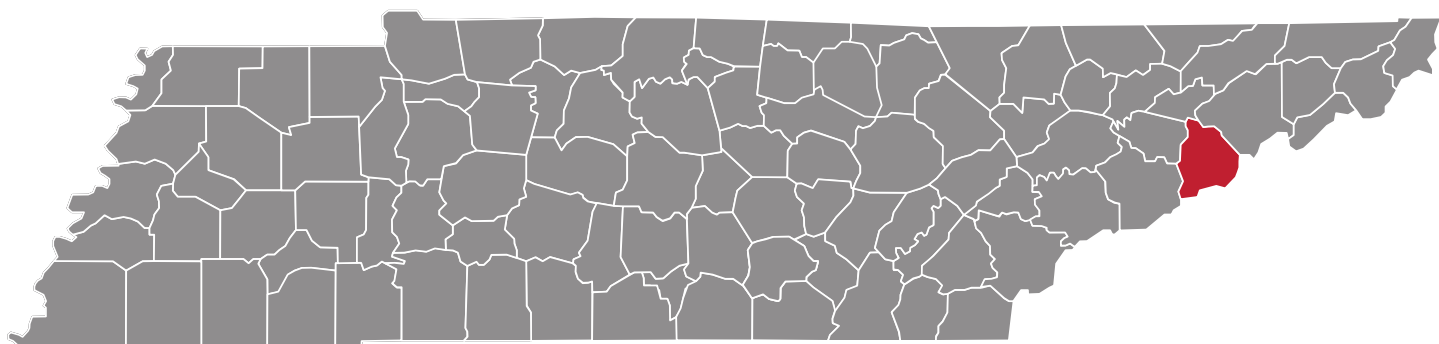
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# Mapping the Agricultural Assets of Cocke County, Tennessee



*Support for the research and extension presented in this document was provided by the Tennessee Department of Agriculture through the Center for Profitable Agriculture, University of Tennessee Extension.*

## Introduction

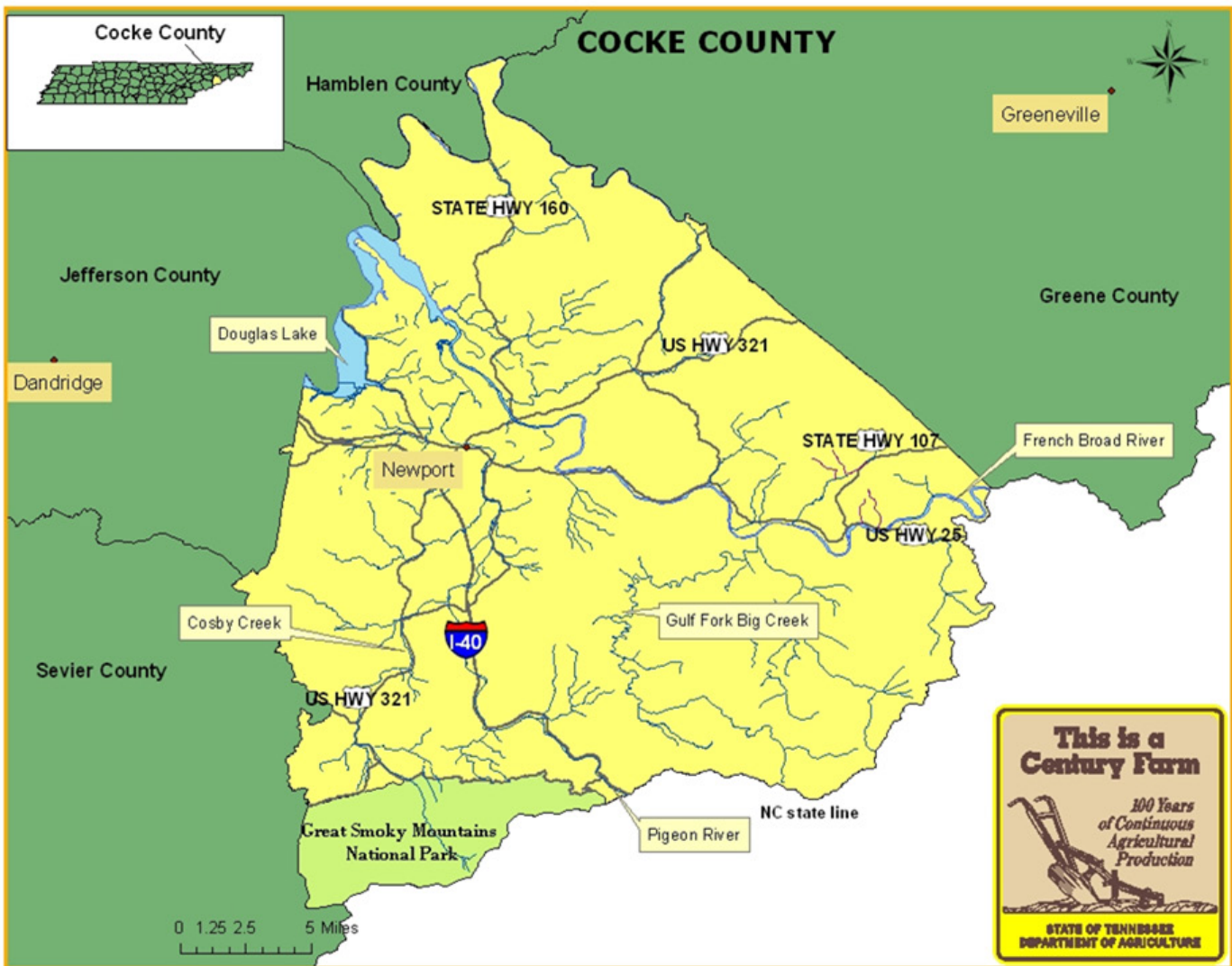
Presented here is an agricultural asset mapping report for Cocke County, Tennessee. The report is based on a combination of focus group meetings with local agricultural leaders and secondary data. The primary goal is to help local leaders identify agricultural assets that could be used to support economic growth and development of the county. A secondary goal is to increase the understanding of local agriculture. Several other counties, Grundy (Hughes and Kimbro, 2021), Hancock (Hughes et al., 2018a), Hardeman (Hughes et al., 2018b), Lauderdale (Hughes and Dupree, 2022), Perry (Hughes and Mathenia, 2021), and Wayne (Hughes and Harris 2022) have undergone the same effort. We believe that replicating this approach could be beneficial for other interested counties.

General facts about Cocke County are provided, followed by a discussion of information derived from an asset mapping exercise with local agribusiness leaders. The opportunities indicated by local leaders are analyzed, including recommendations for pursuing these targets. The most promising opportunities as identified by local leaders are presented followed by a summary and conclusions including a call for further action.

## Background on Cocke County

Situated on the North Carolina Border in eastern Tennessee, Cocke County is rich in scenic beauty and local history. It is 436 square miles (US Census, 2023) with US highways 25, 70, 321, 411, state roads 32 and 73, and importantly US Interstate highway I-40 crossing the county (Figure 1). The town of Newport is the county seat. There are numerous unincorporated communities including Allen Grove, Baltimore, Boomer, Briar Thicket, Bridgeport, Bybee, Cosby, Del Rio, Hartford, Liberty, Hill, Midway, Parrottsville, Tom Town and Wasp. The county is bordered by two North Carolina counties (Haywood, Madison) the east and south, Hamblen County to the north, Greene County to the northeast, Jefferson County to the northwest and Sevier County to the southwest.

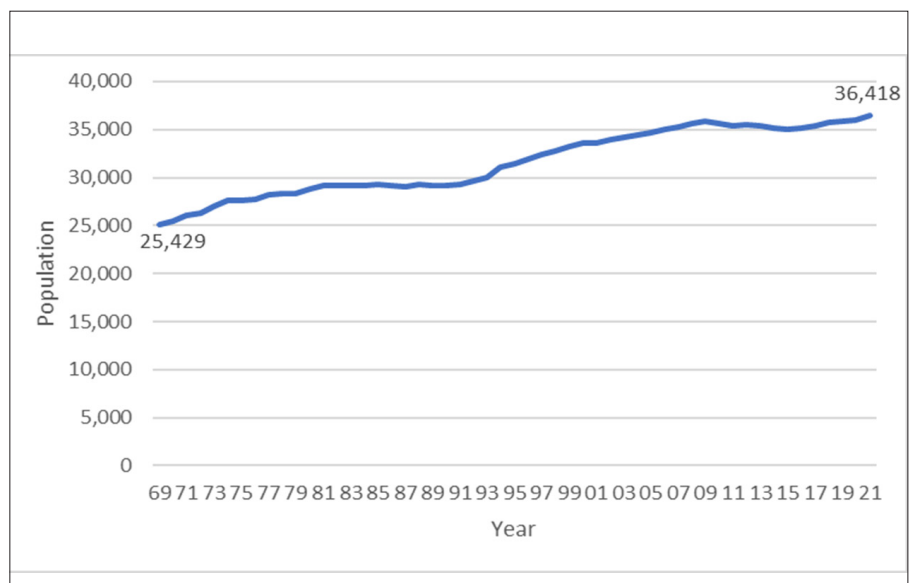
Figure 1. Map of Cocke County, Tennessee.



Source: Tennessee Century Farms.

The 2022 population was estimated to be 36,879, a 2.4 percent increase from 2020. As of 2021, the US Census Bureau reports there are 14,339 households with an average of 2.48 persons per household. The median household income is \$41,558 with an estimated 21 percent of residents in poverty (US Census Bureau). As shown in Figure 2, the population has increased by 11,450 individuals since 1969 (US Bureau of Economic Analysis, 2023).

Figure 2. Cocke County Tennessee Population, 1969-2020.



Source: Bureau of Economic Analysis, 2023.

Agriculture production in Cocke County makes a significant contribution to the local economy. As of 2017, there were 645 farming operations with an average size of 101 acres (US Department of Agriculture, 2020). Among the 65,348 acres devoted to agriculture, 36 percent was in cropland, 30 percent in woodland, 26 percent was in pasture and 8 percent was devoted to other uses. The top commodities for Cocke County include vegetables, melons, potatoes and sweet potatoes, and poultry and eggs.

Based on data from an economic model of the county economy for 2021 (Minnesota IMPLAN Group, Inc., 2000), crop farming accounted for 310 part and full-time jobs, animal production accounted for 261 part and full-time jobs, and logging and forest management accounted for 10 such jobs.

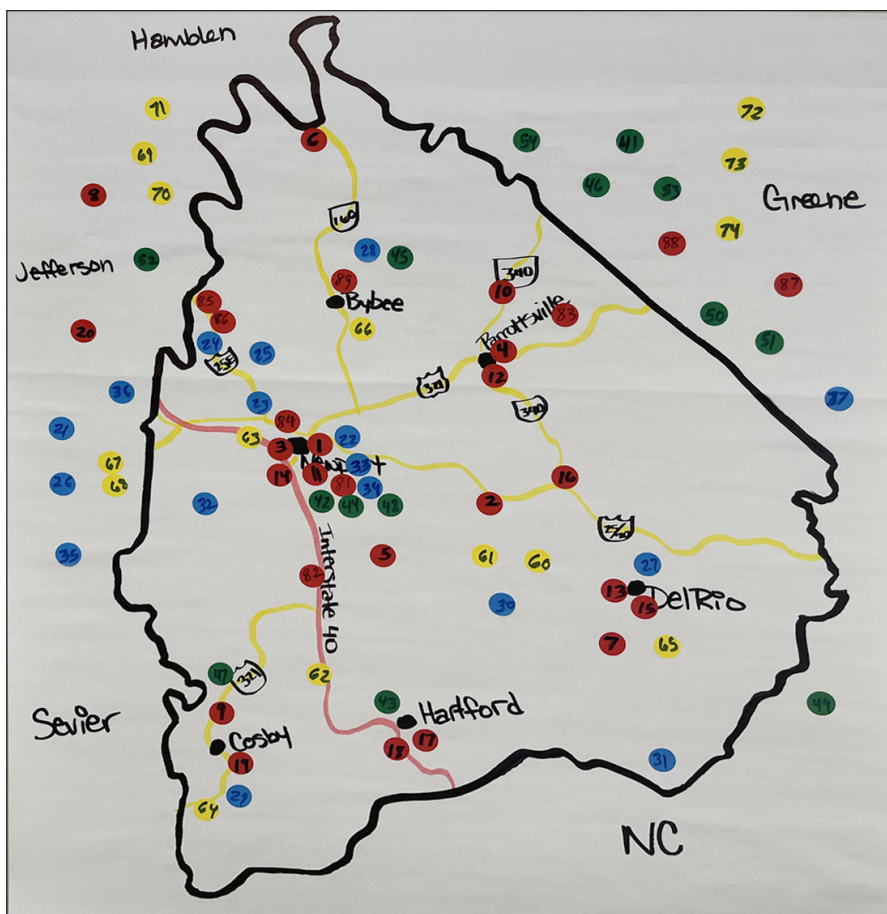
A recent economic impact analysis conducted for all agribusiness activity in Cocke County showed a total direct contribution of 1,251 jobs, \$350.4 million in outputs, and a total impact of \$412.6 million in output and 1,711 jobs (or 16 percent of all employment in the county) (Hughes, 2023).

Cocke County is a Tier Four Tennessee Economy Development County and an Appalachian Region Commission distressed county meaning it ranks at or near the bottom (25 percent) of Tennessee counties in terms of poverty rate, unemployment rate, per capita income and other economic indicators (Transparent Tennessee, 2023).

### Asset Mapping Exercise

An agricultural asset mapping exercise was held with county agricultural leaders (farmers, foresters, agricultural-based businesses and local government leaders). Participants were asked to think about opportunities for the county such as local and regional markets and target areas for local agriculture or agribusiness. The participants were recruited by Sarah Orr, University of Tennessee Extension agent, and represented agricultural leadership in Cocke County. Participants were given dots to place where local businesses (red), physical assets (blue), challenges (yellow), and possible opportunities (green) are available throughout the county (Figure 3 and Figure 4). We present the businesses, assets, challenges and opportunities offered by the participants in the following sections.

Figure 3. Results from Agricultural Asset Mapping Exercise for Cocke County.



**Figure 4. Listed Businesses, Agricultural Asset Mapping Exercise for Cocke County.**

Agri-Businesses		Opportunities	
1.	Wilson Livestock Market (WLM), Newport – Sale Every Saturday	41.	Custom Harvest Processing
2.	Shannon’s Garden – Retail Garden Location	42.	Outdoor Open-Air Pavilion for a true Farmers’ Market
3.	Farmers’ Market – Wednesday/Saturday	43.	Mountain Bike Trails – NTL Forest
4.	Koch’s Food – Broiler Houses	44.	City of Newport Bike Trails
5.	Smokey Mountain Family Farms – packing house for vegetables/tomatoes – multiple	45.	WMA – Tourism Opportunity – Birding, Hunting, Fishing, Hiking, Canoeing – water sports (non-motor)
6.	Chamber’s Produce	46.	Feed Mill – Dry Distillers Grain/Brewer’s Grain
7.	Small Logging Operations	47.	Bush Beans Feeding Barn
8.	Small Sawmills – band mills – various locations	48.	Meat Science Education – TN CTE
9.	Carver’s Orchard – Apple	49.	Develop Agritourism Operations
10.	Goodwater Winery/Vineyard	50.	Local/Branded Products – Foods/Meats
11.	Ole Smokey Distillery	51.	Local Dairies – using the Cruze Farm Approach
12.	Mountain Grey Caucasians Apiaries – Raises Queen Bees	52.	Custom Wood Furniture, Sevier County Market, Tourists
13.	Strange Honey Farm	53.	Sweet Potatoes/Packing House
14.	Hudson & Son Greenhouse	54.	Pick Your Own Operations – Strawberries/Blueberries
15.	French Broad Timber	<b>Challenges</b>	
16.	Burchfield Logging – Firewood to campgrounds in Sevier County	60.	Cell Phone Signals/Broadband
17.	Rafting	61.	Broadband/Internet
18.	Bootlegger’s Distillery	62.	Commercial Infrastructure on three of the five Interstate Exchanges
19.	Adventure Distillery	63.	Downtown Traffic – One Major Route Downtown, Newport By-Pass Coming
20.	Campgrounds	64.	Dollywood Expressway – Hwy. 411 – Controversy surrounding tourists & development (Cosby)
81.	Co-op Newport	65.	Sewer Development – Cosby/Del Rio/Parrottsville
82.	Wilton Springs Hardware	66.	Water Lines for Bybee
83.	East TN Metal	67.	New Demographics – People moving into the county
84.	Demcor Pallets & Lakewood Pallets	68.	Fear of Change
85.	HearthStone Log Cabins	69.	Labor – 6800 commutes out of county; 1200 drive-in for work; Labor force is available – lower pay scale jobs are where a problem for labor exists
86.	OakCrest – Flooring	70.	Young Talent Leaving County
87.	Dairies	71.	Supply Chain in relation to infrastructure; 18-month backorder on transformers
88.	Beef-Cow/Calf – some stockers	72.	Biodiversity – Issues/Disease in timber – Harvestable species; Laurel Wilt and other diseases
89.	Briarwood Ranch Safari Park	73.	Feral Hogs
<b>Physical, Organization Assets</b>		74.	No Large Animal Vet
21.	FFA/4-H		
22.	CTE Vo. Ag Programs – Cocke County High School		
23.	Fairgrounds, Newport		
24.	Innovation Park		
25.	Two – 100-acre Sites for Development – Industry (Water, Sewer, Rail)		
26.	Norfolk Southern Railroad		
27.	Houston Valley Shooting Range		
28.	Rankin WMA		
29.	Great Smokey Mountain National Park		
30.	Cherokee National Forest		
31.	Martha Sundquist State Forest		
32.	Carson Springs Event Center		
33.	Walter State Campus		
34.	University of Tennessee Extension		
35.	Rivers (3)		
36.	Interstate Exits (5) – 2 with Sewer		
37.	Unharvested Timber		

## **Local Businesses**

Local businesses were identified based on their importance and (or) ability to contribute to economic growth in the county. Identified businesses included agricultural input providers, such as the Smoky Mountain Farmers Co-op and Wilton Springs Hardware (Figure 4). Other important local agri-businesses include several distilleries (such as Bootlegger's Distillery), a winery-vineyard (Goodwater Winery/Vineyard), Smokey Mountain Family Farms (a packing house for vegetables and tomatoes) and Mountain Grey Caucasians Apiaries that raises queen bees.

Other identified businesses rely on local forests that cover the majority of land in Cocke County or on other natural resources. These businesses included several small sawmills and logging operations spread throughout the county, French Broad Timber, and Burchfield Logging who provide firewood to campgrounds in Sevier County (Figure 4). Other natural resource based recreational businesses in the county include guided river rafting and campground providers.

## **Physical, Other Assets**

Attendees emphasized the scenic assets of the county including the three rivers (French Broad, Pigeon, Nolichucky) (Figure 4). State (Martha Sundquist) and national (Cherokee) forests, the Rankin Wildlife Management Area, and the Great Smoky Mountains National Park are impressive county physical assets as is the unharvested timber in the county. The county has five I-40 Interstate exits and two 100-acre sites for industrial development with city water and sewer, and rail access. Educational and other organizational assets include University of Tennessee Extension, the Walters State Community College campus, and the fairgrounds in Newport. Cocke County High School also has an agricultural student program and a Career Technical Education (CTE) vocation program.

## **Challenges**

In terms of agriculture, attendees emphasized the lack of large animal veterinary care, feral hogs, and disease issues for timber, especially species that are harvested (Figure 4). Access to qualified workers and young talent leaving the county are related problems. Traffic in certain locations and commercial infrastructure, controversial highway development, and the need for sewer and city water in certain locations are infrastructure issues. Likewise, there is limited broadband access and even limited cell phone service in Cocke County. Two major issues are educated young people leaving the county for greater opportunities elsewhere and the level of out-commuting to jobs in other locations by better educated workers. Finally, fear of change and new people moving into the county are perhaps interrelated issues.

## **Opportunities**

Meeting attendees mentioned numerous opportunities for using agriculture to grow the county economy (Figure 4). A number of these centered on developing local foods, especially with respect to developing an enhanced facility for the farmers market, developing a brand for locally produced food and meats, and marketing products produced by local dairies. Likewise people mentioned further developing agritourism. Other opportunities related to animal production and/or processing such as starting a custom harvest animal processing facility, developing meat science education for students, a Bush Beans based feeding barn, and starting a feed mill using dry distillers grains and brewers grains. Meeting attendees also mentioned starting a packing house for locally grown sweet potatoes, developing pick your own operations for strawberries and blueberries, and making custom wood furniture for tourists especially in the Sevier County Market. Other suggested opportunities include mountain bike trails for national forest in the county and bike trails in the city of Newport (and developing businesses that provided services to the users of these assets). The wildlife management area in the county was also an asset that could be used to develop businesses tied to birding, hunting, fishing, hiking and canoeing, and in general non-motorized water sports.

## **Follow-Up Analysis and Discussion**

A subsequent meeting was held with Cocke County agricultural leaders on September 25, 2023. The discussion centered on assessing the agricultural assets discussed in the prior meeting and on the results of our data analysis.

## Targeted Industry Economic Cluster Approach

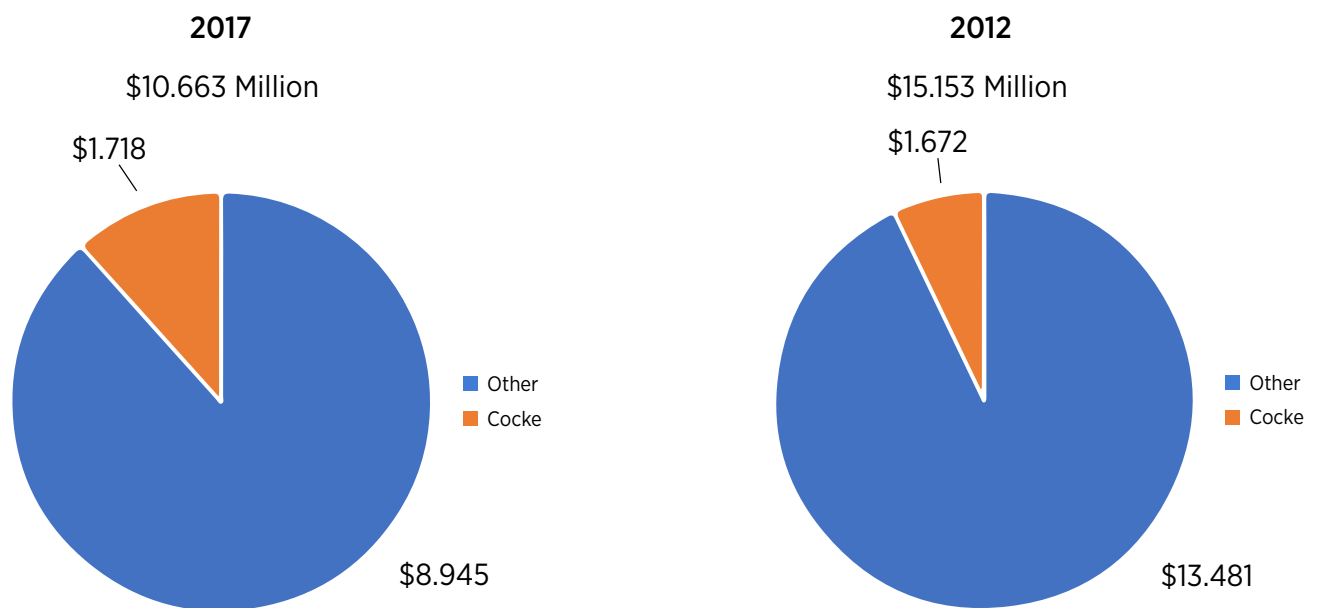
We used a targeted industry approach to identify industries as possible assets. Our data analysis includes five counties, specifically Cocke County and the surrounding Tennessee counties of Hamblen, Greene, Jefferson and Sevier. In several cases, our analysis dovetails with the assets identified by local agricultural leaders. Based on secondary data sources (IMPLAN data for 2013 and 2021), we examined industries based on the number of jobs in the region (a minimum of ten), concentration (location quotients greater than 1.5 for output, jobs and pay), and regional and US growth estimates for 2013 versus 2021 (for output, jobs and pay). We also used financial analysis provided by the website IndustriousCFO Financial Analysis (2023) regarding business failure rates and profitability compared to the national average for all US businesses in their database.

We also employed Census of Agriculture data for 2012 and 2017 to analyze agriculture in the county and the region. The results of the analysis for row crop, hay, livestock-related farming, fruits, vegetables and ornamental plants are discussed next.

## Local Row Crops and Hay

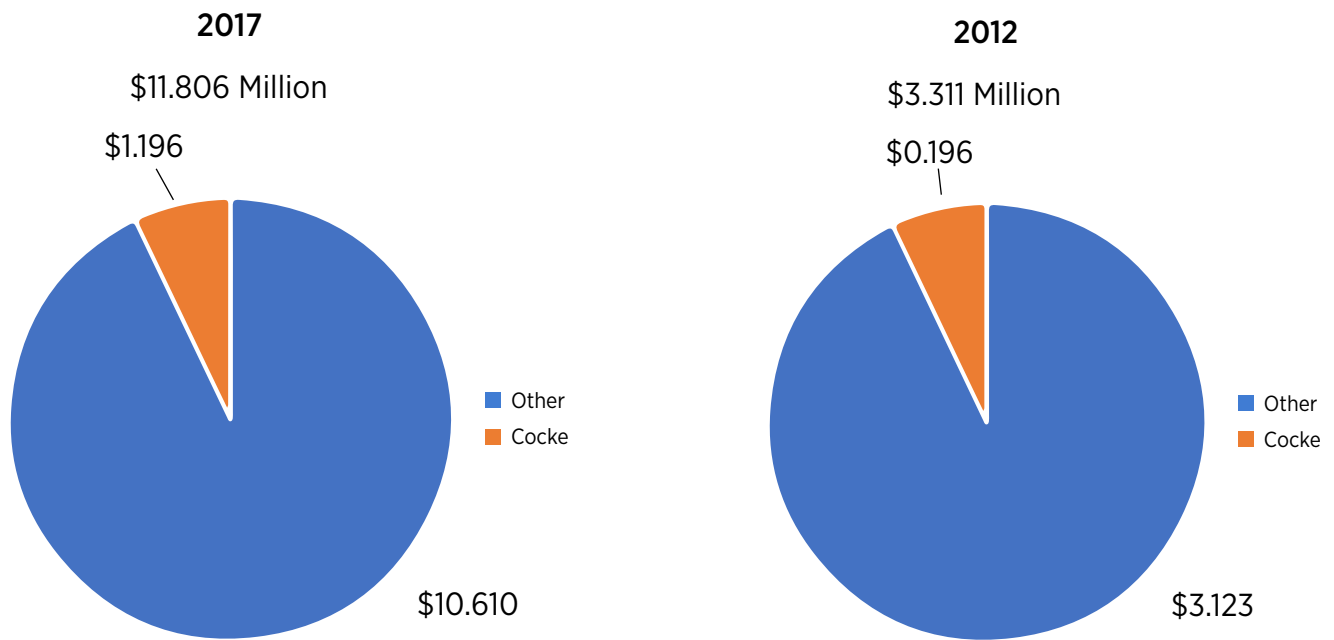
Row crops are important parts of the agricultural industry in Cocke County and its neighboring counties. However, the value of grains and soybean production decreased from \$15.153 million in 2012 to \$10.663 million in 2017 for the five-county region, although it grew from \$1.672 million in 2012 to \$1.718 million in 2017 for Cocke County (Figure 5). The value of hay and other crop production increased for both the region (from 3.311 million to \$11.806 million primarily due to Greene County) and Cocke County (from \$0.196 million to \$1.196 million) over the same period (Figure 6).

Figure 5. Value of Regional Grains and Oilseed Sales, 2017, 2012.



Source: Census of Agriculture, 2012, 2017.

Figure 6. Value of Regional Hay and Other Crops Sales, 2017, 2012.

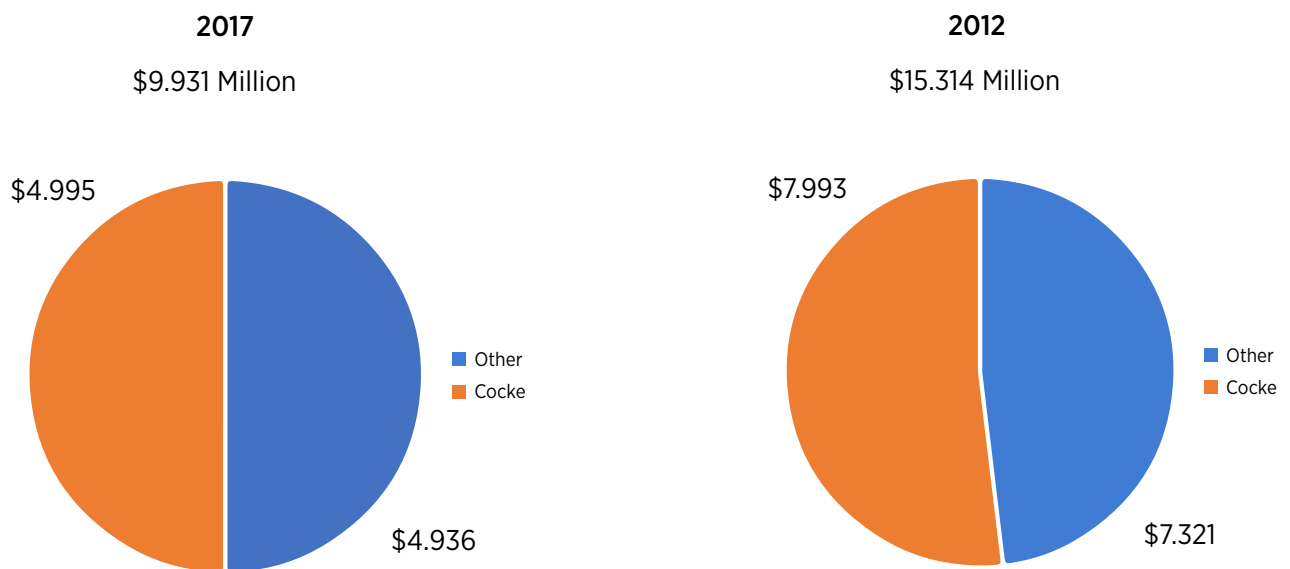


Source: Census of Agriculture, 2012, 2017.

### Local and Regional Fruits, Vegetables and Ornamental Horticulture

As shown in Figure 7 vegetable sales (including melons, potatoes and sweet potatoes) in the five-county region decreased from \$15.314 million in 2012 to \$9.931 million in 2017 while Cocke County vegetable sales also declined at a similar rate. Regional and county fruit both had a slight increase in sales from \$0.515 million in 2012 to \$0.979 million in 2017 for the county (Figure 8). Ornamental horticulture (nursery, greenhouse, floriculture, sod and short rotation woody crops including Christmas trees) sales in the five-county region increased from \$1.514 million to \$4.760 million and from \$0.297 million to \$1.183 million in Cocke County from 2012 to in 2017 (Figure 9).

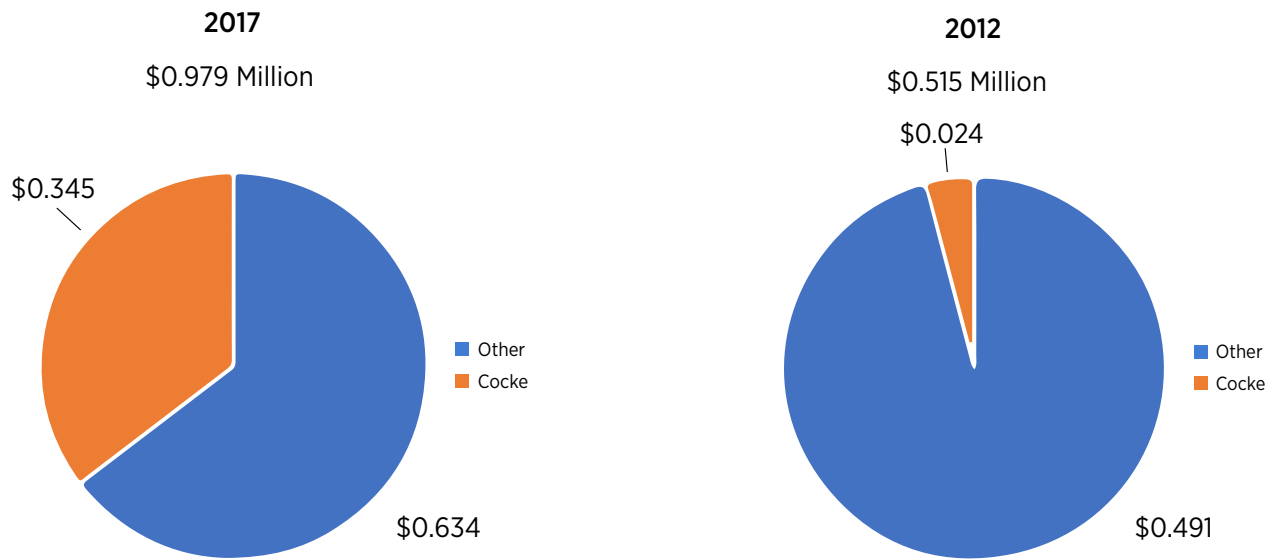
Figure 7. Value of Regional Vegetable, Melons, and Potatoes Sales, 2017, 2012.



Source: Census of Agriculture, 2012, 2017.

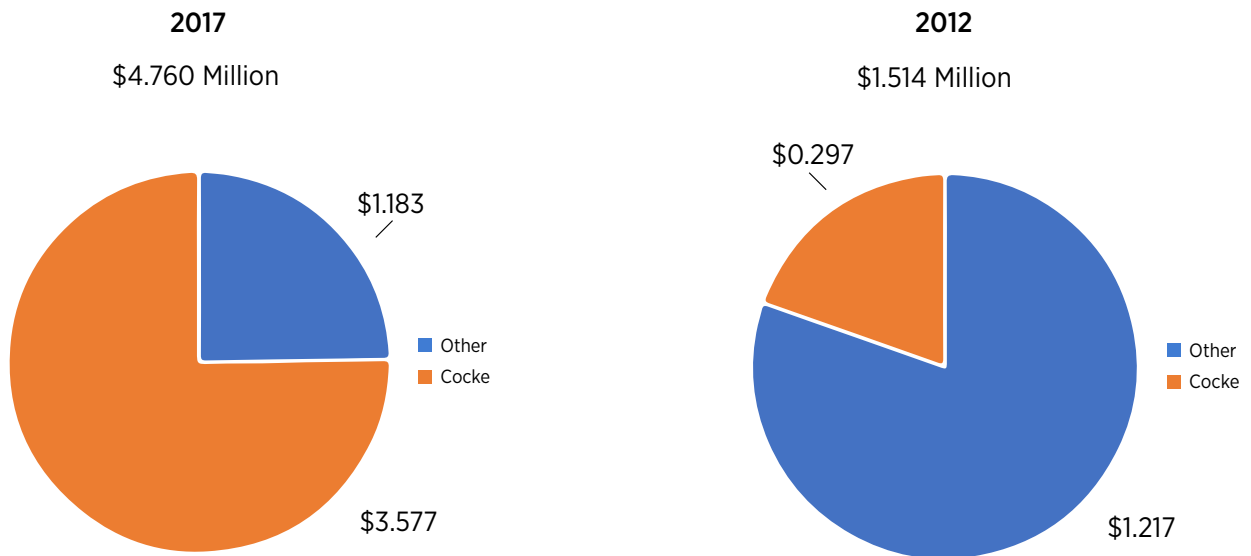


Figure 8. Value of Regional Fruit Sales, 2017, 2012.



Source: Census of Agriculture, 2012, 2017.

Figure 9. Value of Ornamental Horticulture Sales, 2017, 2012.

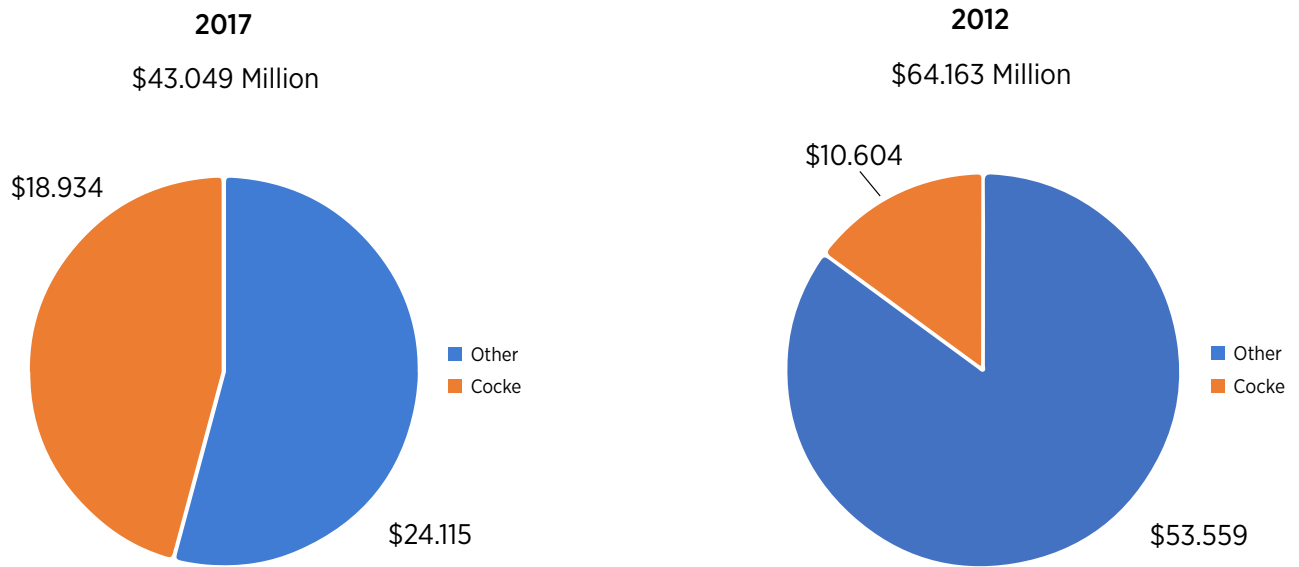


Source: Census of Agriculture, 2012, 2017.

### Local Livestock

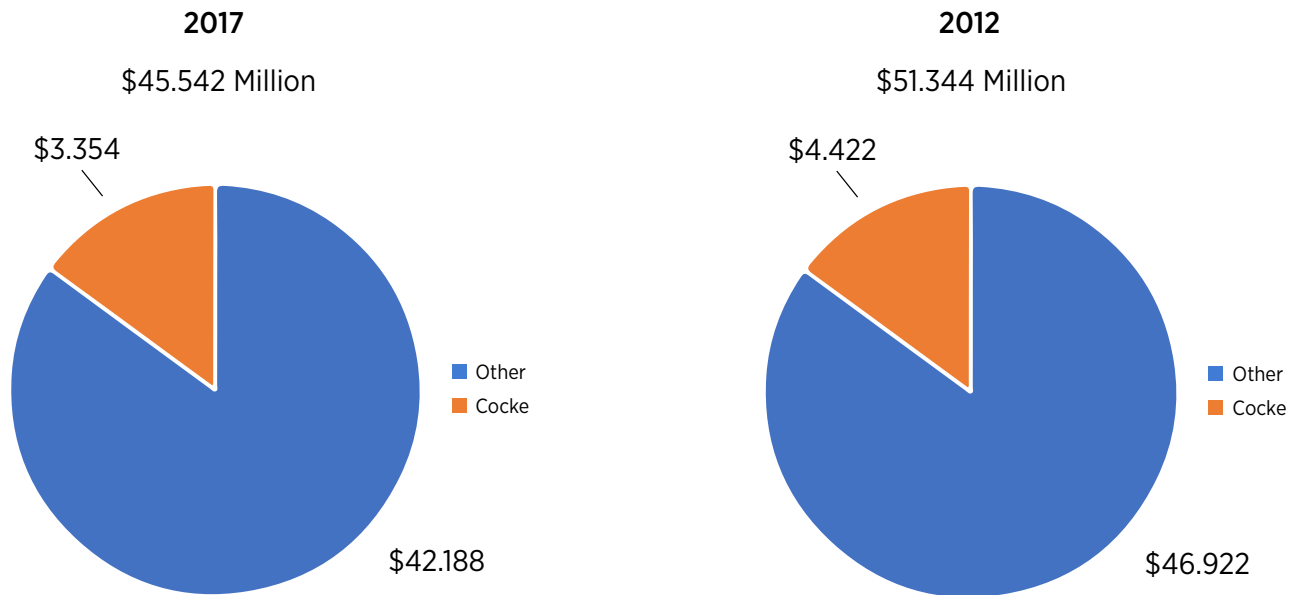
Livestock production remained important at both the county and the regional levels although the growth situation from 2012 to 2017 is mixed. Because of the Koch Foods poultry processing facility in Hamblen County, poultry and eggs are an important sector, despite the decline in the values of their sales in the five-county region from \$64.163 million in 2012 to \$43.049 million in 2017. However, poultry and eggs sales in Cocke grew from \$10.604 million in 2012 to \$18.934 million in 2017 (Figure 10). From 2012 to 2017, the value of cattle sales decreased from \$51.344 million to \$45.542 million for the region and from \$4.422 million to \$3.354 million in Cocke County (Figure 11). The value of goat and sheep sales show little change for both the five-county regional level and Cocke County (Figure 12). The value of dairy sales declined from \$17.792 million to \$11.152 million and from \$2.256 million to \$1.881 million in Cocke County from 2017 to 2012. (Figure 13).

Figure 10. Value of Regional Poultry and Eggs Sales, 2017, 2012.



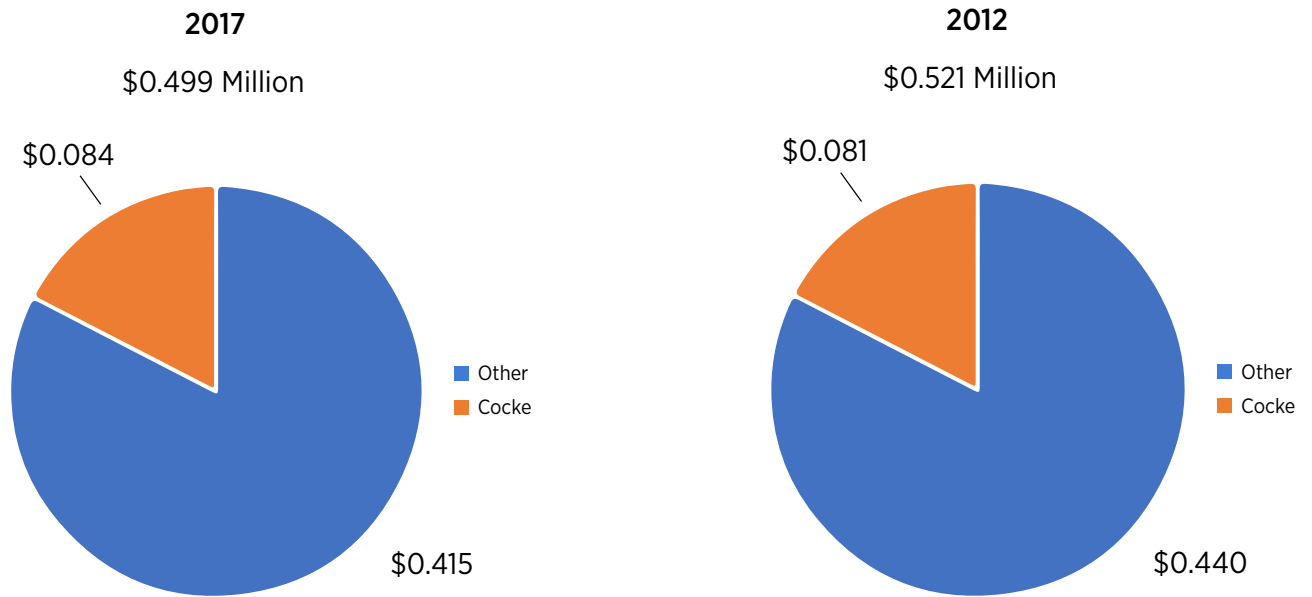
Source: Census of Agriculture, 2012, 2017.

Figure 11. Value of Regional Cattle Sales, 2017, 2012.



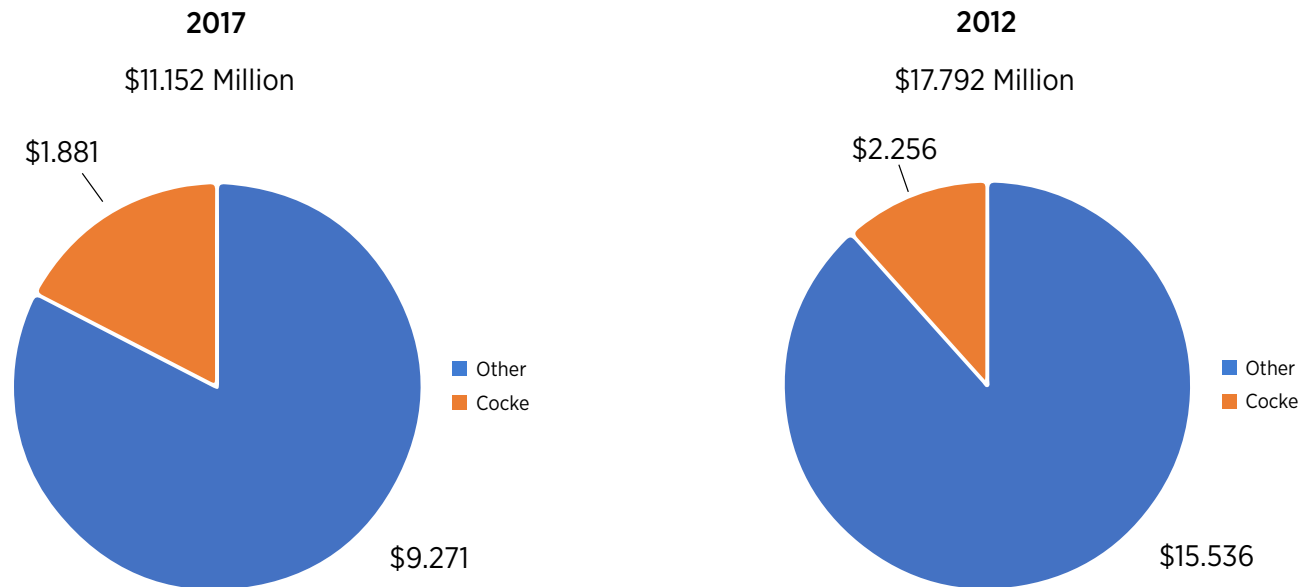
Source: Census of Agriculture, 2012, 2017.

Figure 12. Value of Regional Sheep and Goat Sales, 2017, 2012.



Source: Census of Agriculture, 2012, 2017.

Figure 13. Value of Regional Dairy Sales, 2017, 2012.



Source: Census of Agriculture, 2012, 2017.

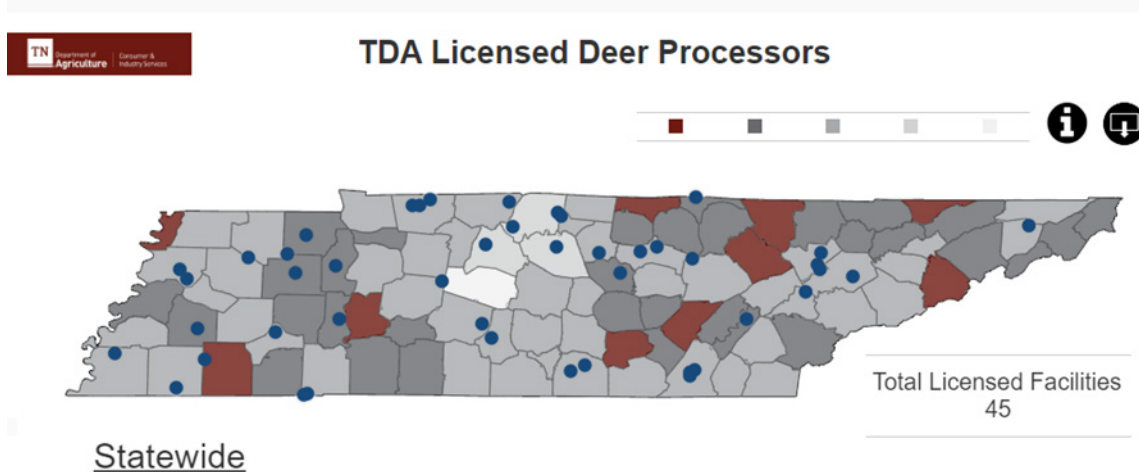
## Analysis of Opportunities

We further examined the opportunities that meeting attendees had highlighted. This work is provided by topics as follows.

### Animal Processing Facility

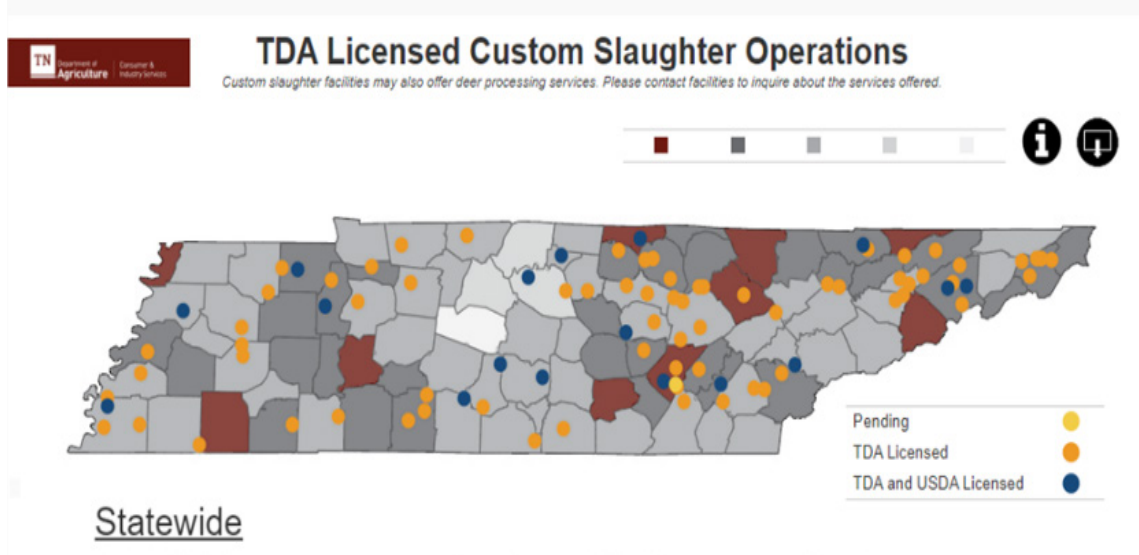
Meeting attendees indicated that a facility providing multispecies livestock processing was seen as warranting further investigation. There are no USDA (US Department of Agriculture) inspected or custom livestock processing facilities in Cocke County although Sevier, Hamblen, and Greene county each have several custom processing facilities (Figure 14). Greene County has two USDA facilities and there is a fairly large facility likely to start in Washington County (Tennessee Department of Agriculture, 2023a). However, the closest deer processor is in Jefferson County (Figure 15) (Tennessee Department of Agriculture, 2023b).

Figure 14. Tennessee Department of Agriculture, Licensed Custom Slaughter Operations.



Source: Tennessee Department of Agriculture.

Figure 15. Tennessee Department of Agriculture, Licensed Deer Processing Operations.



Source: Tennessee Department of Agriculture.

Hughes et al. (2017) indicates that a United States Department of Agriculture approved livestock slaughter facility could be profitable given the proper conditions. Yet given the likely existence of at least three fairly close USDA inspected facilities and others could be coming on board, it is not recommended that such a project be pursued by local leaders. Starting a custom facility, especially one that processed deer is an avenue worth exploring.

A related topic suggested by attendees was starting a meat science education program at Cocke County High School. Meat science would be an appropriate fit with the school's Animal Science and Culinary Arts programs. Currently, there is a major shortage of meat processing workers, specifically butchers (Hughes et al., 2023). New animal processing or meat science programs at the Tennessee College of Applied Technology (TCAT) at Elizabethton and at Walters State would be possible models for a Cocke County effort. The Department of Animal Science at the University of Tennessee may also be able to assist such an effort.

### **Sweet Potatoes Processing Facility**

Meeting attendees indicated that a local sweet potatoes processing facility might be an idea worth developing. The sweet potatoes processing industry is very competitive and is dominated by growers in eastern North Carolina (83,700 acres in 2022) followed by Mississippi (29,500 acres), California (19,000 acres) and Louisiana. The processing facilities tend to be fairly sizable; for example, Southern Produce LLC processes more than 3 million bushels in three different states. Garber farms in Louisiana draws from 5,000 acres, although this land also produces several other crops. Sweet potatoes grow best in sandy loam soils so an adequate amount of appropriate soils is probably a prerequisite. Data regarding the production of sweet potatoes in Cocke and surrounding counties is not available, although there is considerable production in the combined value of vegetables, melons, potatoes and sweet potatoes as shown in Figure 7. Further investigation is needed regarding the amount of production required for a processing facility and if Cocke County and nearby areas could provide that level of production.

### **Dried Distillers and Brewers Grains, Bush Beans**

Meeting attendees stated that Cocke County distilleries and breweries in the area supply dried distillers and brewers grain to meet the needs of area livestock. According to the Distillers Grains Technology Council (2023), such an operation could produce a number of potential products based on the decision to remove oil or not, to include bran, or to concentrate protein. Among the various products distillers dried grains with solubles is the most widely manufactured product. A major concern would be that either the materials in question would have to be dried at the distillery or breweries themselves or transported wet (which after much distance at all becomes uneconomical). Such a facility would fall into the other animal food manufacturing industrial sector. Based on our analysis of company financial data provided by IndustriousCFO, these operations have a low (1 percent) return on investment (ranking 19 percent among all industries) but perform much better than average (better than 81 percent of all industries) with a loan failure rate of 4 percent. Smaller, (\$873,000 in sales) operations are also feasible.

A similar topic mentioned by attendees was having a Bush Beans livestock feeding barn using the operation's food waste. Although the Bush Beans production facility is close to Cocke County (around 10 miles from Newport) and despite their apparent livestock operation in Cocke County transportation could still be an issue for the food waste in question (although the water is removed and applied to pastureland for their two cattle operations). A bigger hurdle is that their wastewater is currently used to feed an anaerobic biogester that generates biogas (methane) used for energy at the facility (Best, 2022 and see Donahue, 2023 for discussion of their Wisconsin facility). They are currently considering similar technology for their food waste.

Despite these concerns, both of these activities (distillers-brewers grains and Bush Beans waste) could be feasible and beneficial for Cocke County livestock producers and the local economy. A committee could be formed to look into both options.

### **Farmers Market Infrastructure**

A very doable project indicated by meeting attendees was the construction of a facility for the farmers market in the county. A great example of such a facility is the open-air pavilion that was constructed for the Pikeville, Tennessee, farmers market. As shown in Figure 16, the facility could also be designed to serve as an entertainment venue. The facility was at least in part funded by money provided by the Tennessee Office of USDA Rural Development. Cocke County stakeholders could contact Pikeville-Bledsoe County Officials and USDA Rural Development to investigate building such a facility. One concern expressed by local leaders is an adequate number of vendors who would use the facility.

Figure 16. Pikesville, TN (Bledsoe County), Farmers Market Pavilion.



## Local Foods, Agritourism

Several suggested projects centered around the concept of local foods including direct to consumer marketing by a local dairy, a strawberries and blueberries you-pick operation, and branding for meats and other local farm products. Developing agritourism was mentioned as an idea that very much overlaps with developing local foods. Current agritourism operations include animal petting at Windsong Hills Alpaca Farm and RV camping at Goodwater Vineyards.

One suggested project was direct to consumer marketing of ice cream and milk following the approach used by Cruze Farm in Knox County. Their ice cream is sold directly to consumers at two locations (one in downtown Knoxville) and their milk is marketed directly and through grocery stores. They use low heat pasteurization, which is a batch process with higher cost but better quality than high temperature flash pasteurization (Cruze Farm Dairy, 2023). Catering to interstate traffic could be a strong market for such an operation. Mark Morgan, University of Tennessee Department of Food Science, could assist by providing advice regarding dairy processing equipment in general and for a small-scale operation. Such an effort could also receive financial assistance under the Southeast Dairy Business Innovation Initiative either as a beginning processor or for special equipment purchases. In fact, Cruze Farm has received one of these grants, which seem to usually run up to \$25,000.

Liz Eckelkamp (eeckelka@utk.edu) with the University of Tennessee Department of Animal Science is the contact for this program. Another possible means of funding such an operation would be a Value-Added Producer Grant (VAPG), which provides up to \$250,000 for working capital or up to \$75,000 for feasibility or marketing studies. University of Tennessee Extension provides an annual set of training regarding applying for such funds. The program requires a one-to-one match and for working capital the farmer (or set of farmers for a cooperative type effort) must supply more than 50 percent of the milk that would be processed by the facility. Flowers Creamery, LLC, in Ethridge, TN, was awarded a VAPG in 2020.

A berry pick your own operation was mentioned as a means of developing local agritourism. Based on the publication "Getting Started in Agritourism" by Roth and Ochtorski (2016), the keys to a successful you pick operation is having the right location (with easy access and use), having the right personnel (must have people persons), and proper planning especially with respect to liability issues, crop damage by customers, facility design, a marketing plan (who is your target market?), and a business plan (including attracting and retaining the right employees).

For developing agritourism in general (another topic indicated by attendees) and for a you pick operation in particular target markets would include tourists off the interstate and visitors to Sevier County and nearby other areas. Marketing efforts should be integrated with other efforts to market Cocke County to tourists. Assist in starting agritourism projects can be provided by the Tennessee Department of Agriculture (2023c), the Tennessee Agritourism Association, and by the University of Tennessee Extension Center for Profitable Agriculture (Megan Leffew [mleffew@utk.edu](mailto:mleffew@utk.edu)).

A related topic indicated by meeting attendees was branding for locally grown and produced meats and other food items. A good publication regarding this topic is “Moving Food Along the Value Chain: Innovations in Regional Food Distribution” (by Diamond and Barham, 2012). Such an effort should be used to identify, brand and market differentiated local farm products. An emphasis must be placed on quality control with respect to any branded products. The brand should also reflect local core values that will appeal to customers. An example is provided in Figure 17, that effectively and simply states that its products are “Fresh. Local. Honest.” A successful East Tennessee example of branding local foods is Grainger County tomatoes that are successfully marketed at regional grocery stores and that has an annual festival. County leadership could work with a group of students from the University of Tennessee, Walters State or other institutions in developing the brand.

Figure 17. Example of Local Food Branding Logo.



Source: *Diamond and Barham.*

Custom woodworking operations that would sell small furniture and small gift items to tourists was another idea stated by attendees. Accessing appropriate literature such as “Woodshop News” or “Woodworker’s Journal” would provide ideas regarding product mix and how to develop such a business. There is also a Tennessee Wood Products Branding Initiative that could potentially be helpful.

Taking the custom woodworking idea a step further, local leaders might consider pursuing a much bigger project of developing an artisan center similar to West Virginia’s Tamarack marketplace. Tamarack sells handcrafts and fine art produced by in-state artisans and also regional cuisine (2023). It encompasses a retail store, working studios for artisans, an arts gallery, a food court highlighting local food and a conference center. In 2008 the facility had an economic impact of \$6.4 million generated by 500,000 visitors. Working with state government, Cocke County leadership could seek to develop a similar artisan facility on one of the I-40 exits.

### **Mountain Bike Trails, City of Newport Trails**

Meeting attendees indicated that supporting the ongoing development of mountain bike trails in Cherokee National Forest in the Halls Top Mill Creek, Cosby Green Mountain Areas was a worthwhile endeavor. A \$6 million grant for developing and \$0.6 million for designing a 50- to 75-mile trail has been obtained.

Cocke County leadership needs to consider ways to generate economic activity from the trail. Research (Buning et al., 2019) indicated that mountain bike trail riders tend to be male, middle aged, with above average income, but that the market is quite diverse. Scenic views, trail upkeep, trail facilities (restrooms, signage) are important in attracting and retaining trail riders. In terms of accommodations the market is segmented, with campgrounds for younger riders and bed and breakfast or other types of inns for older riders. In terms of food, riders prefer access to beer and burgers. Social medium and word of mouth are the main means of communications in the mountain bike community. In this regard, connections to regional mountain bike groups need to be made to 1) determine what they want, 2) spread the word about trail activities, and 3) develop business opportunities. A starting point would be to work with the Smoky Mountain Wheelmen, an East Tennessee area group that provides support and encouragement for and to the bicycling community. Local leaders could also work with the National Forest mountain bike community, local leaders and local enthusiasts in further trail development. Finally, recreation-based business training could be provided and local leaders could also seek Adventure Tourism District Designation (a program under the Tennessee Department of Tourists) that allows for tax credits based on generating employment opportunities. The designation also requires a business plan that must be based on “quantifiable data demonstrating that the creation of an adventure tourism district would enhance sustainable economic development in the area (Tennessee Department of Tourist Development, 2021).” In 2017 five districts were developed and in 2022 six districts were developed. The business plan could be used as a roadmap for further developing tourism in Cocke County.

A related idea is developing a bike path (greenway) system in the city of Newport as expressed by attendees for use by joggers, non-motorized vehicles and walkers. The first step in developing such a system is to conduct reconnaissance regarding interested parties in supporting the development of such a system, including possible paths (these tend to follow flood plains), and what landowners would be impacted by developing such a system. Useful first contacts regarding moving forward with this project could include The Great Smoky Mountains Regional Greenway Council (which is Knoxville-centric but could be helpful) and the Tenngreen Land Conservancy (2023, which could be especially helpful with issues surrounding the easements that the system would require). Funding for developing the system could be possibly obtained from several Tennessee Department of Transportation (TDOT) programs. One such program is the TDOT, Transportation Alternatives Program (2023a), which can be spent on bicycle and pedestrian infrastructure and which requires a 20 percent match. Another TDOT program is the Multimodal Access Grant (2023b), which can be used to support the transportation needs of pedestrians, bicyclists and transit users through infrastructure projects that address existing gaps along state routes and require a 5-10 percent match.

### **Nature-Based Recreation, Tourism**

Water-based and other nature-based tourism (guided hunting, fishing, nature viewing, hiking) were also suggested as ways to facilitate economic activity by attendees. In terms of water-based activity the French Broad, Pigeon and Nolichucky rivers in the county are major assets. The closure of the paper mill in Canton North Carolina (with the elimination of its affluent) provides an opportunity for greater use of the Pigeon River. The already established rafting industry also could be used as a way to further the use of these assets. One idea would be to develop a river trail, which is a waterway designated for recreational use especially with non-motorized watercraft (such as canoes and kayaks) and often receiving special environmental protection. The Tennessee RiverLine (2023) is currently developing a river trail from Knoxville to Paducah, KY. Discussions could be held with their leadership concerning how to extend the river trail east into Cocke County. A river trail could be used in developing canoeing and guided fishing businesses.

Guide hunting, fishing, and nature and wildlife viewing (especially birding) were also suggested as ways to grow tourism. The heavily forested areas of Cocke County provide great opportunities for various types of hunting and nature viewing. In particular the Rankin Wildlife Management Area could serve as a focal point for this effort. A working group could be formed to further assess the potential for developing economic activity tied to tourism and recreational use of these assets.

### **Further Data Analysis**

The target industry cluster approach was applied to existing industries to also identify possible assets for further development. Based on our criteria, we evaluated relevant food processing, wood product, paper product and furniture manufacturing sectors for further development. The sectors with the most promise for growth across all agricultural processing and input industries based on our data analysis are shown in Table 1. (Full results from the analysis are provided in Appendix A; the number of criteria met by the industry in question are provided in parentheses such as the five for a winery.)

Valued-added food products processing that has potential for growth included, an additional winery (5); confectionery manufacture (5); another distillery (4.7); poultry processing (4.8); and cut stock, re-sawing lumber and planning (4.6). Another winery would be part of a growing state industry with a strong industry association and with the possibility of using Tennessee-grown grapes. The wood processing facility would further utilize Cocke County's forests. These possible targets were added to the list for consideration for further development by local agricultural leaders.



**Table 1. Most Promising Sectors for Growth Based on Data Analysis.**

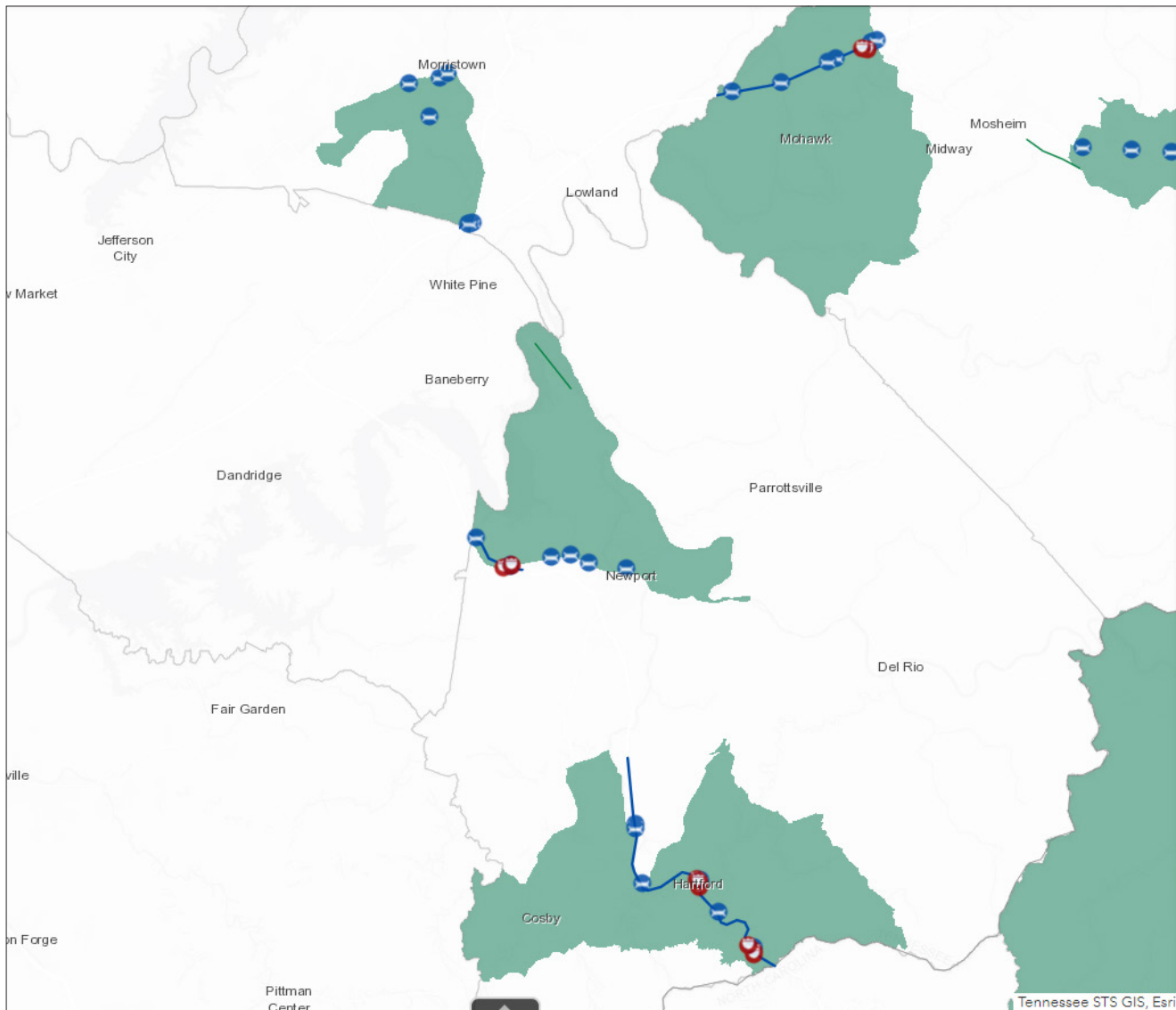
Sector	Number of Check Marks
Confectionery manufacture	5
Winery	5
Poultry processing	4.8
Distillery	4.7
Cut stock, resawing lumber and planning	4.6

Source: Analysis of IMPLAN and IndustriousCFO data by authors.

### Opportunity Zone

The Opportunity Zone Program is a capital gains tax reduction program where realized capital can be invested in real estate and businesses in designated economically distressed communities. Appropriate investments in such areas are taxed at a lower rate including any resulting capital gains. Nationally, there are 8,760 designated Qualified Opportunity Zones including two in Cocke County (Figure 18) (US Department of Commerce, 2020).

**Figure 18. Cocke County Opportunity Zones.**



Source: U.S. Department of Transportation.

## Targets Identified by Local Agricultural Leaders

The group of Cocke County agricultural leaders reconvened on September 25, 2023. A presentation was made containing the information that had been ascertained regarding their suggestions and our secondary data analysis. Participants were asked to think about opportunities for the county such as local and regional markets and target areas as it pertains to local agriculture or agribusiness. Based on our presentations and discussions, the leadership group was asked to indicate the activities that had the greatest potential for helping to grow the local economy. They were also allowed to insert additional options for consideration (such as small poultry and rabbit processing). Each individual was provided with three dots and told to distribute the dots as they wished. A ranking of the various potential targets based on the vote of these local leaders is provided in Table 2.

**Table 2. Rank of Targets Identified by Cocke County Agricultural Leaders.**

Potential Target	Number of Target Votes
Outdoor, open-air pavilion for farmers market	14
Custom harvest facility	13
Meat science education – TN CTE	12
Local branded products, foods meat	10
Mountain Bike Trail National Forest	7
WMA, Tourism, Recreation	6
Newport bicycle Trail	2
Agritourism	1
Small poultry, rabbit processing	1
Homestead new farmers	1
Tomato Farm	1

Source: Analysis of IMPLAN and IndustriousCFO data by authors.

## Moving Forward

Provided here are the results of an agricultural mapping exercise conducted with local agricultural leaders in Cocke County, Tennessee, in cooperation with the University of Tennessee County Extension Office. Results were based on a combination of our analysis of secondary data and primary data provided by the local leaders. Based on the distribution of votes as shown in Table 2, the top four items had 14 through 10 votes.

The outdoor, open-air pavilion for the farmers market had the most votes at 14. The custom meat processing facility, which would likely also include deer processing, had the second most votes at 13. The meat science education program at the high school was a close third at 12 votes. Finally, branding for local products was fourth with 10 votes. It is recommended that these four topics be pursued as possible avenues of further growth. It is also recommended that local subcommittees be formed to further investigate the possibility of moving forward with on the ground projects in each of these four areas. These efforts could take advantage of state tax credits and a variety of grant programs through the Tennessee Department of Economic and Community Development or the Tennessee Department of Agriculture, Agriculture Enterprise Fund (2023d), or the Tennessee Office of US Department of Agriculture Rural Development. It is recommended that a meeting be held with representatives of such organizations in the near future to explore developing relevant opportunities.

**Appendix A. Data Analysis of food processing, wood product, paper product, and furniture manufacturing sectors for further development.**

**Agricultural Input Providing Sectors with Development Potential.**

Sector (# Criteria Met)	Financial Analysis	Regional Minimum Size (jobs)	Regional Strength (Iq)	Regional Growth	U.S. Growth
Lawn & Garden Equipment Manufacture (4.9)	Avg 65% (30% + 100%) Low return, very low risk	✓	✓	✓	✓

**Food Processing Sectors with Development Potential.**

Sector (# Criteria Met)	Financial Analysis	Regional Minimum Size (jobs)	Regional Strength (Iq)	Regional Growth	U.S. Growth
<b>Confectionery Manufacture (5)</b>	<b>Avg 75.5% ✓ (67% + 84%)</b> <b>Relative high return and low risk</b>	✓	✓	✓	✓
Canned fruits and vegetables manufacturing (2.8)	Avg 55.5% ✓ (48% + 63%) Average return, better than average risk	✓	✓	<b>no</b>	<b>no</b>
Cheese manufacture (4)	Avg 48% (59% + 37%) Slightly above average return, risky	✓	✓	✓	✓
Poultry processing (4.8)	Avg 52.5% ✓- (40% + 65%) Somewhat below average low return, better than average risk	✓	✓	✓	✓
Meat processed from carcasses (4)	Avg 23.5% (8% + 39%) Very low return, risky	✓	✓	✓	✓
Bread and bakery product, except frozen, manufacture (3)	Avg 29% (22% + 36%) Low return, quite risky	✓	<b>(2)</b>	✓-(3)	✓

Food Processing Sectors with Development Potential, cont.

Sector (# Criteria Met)	Financial Analysis	Regional Minimum Size (jobs)	Regional Strength (Iq)	Regional Growth	U.S. Growth
Dry pasta, mixes, and dough manufacture (2)	Avg 45% (12% + 78%) Very low return, low risk	√	(2)	√	(2)
Ice cream and frozen dessert manufacture (3.8)	Avg 39% (48% + 30%) Average return, quite risky	√	√	√	√-(3)
Frozen cakes and other pastries manufacturing (4.2)	Avg 43% (57% + 29%) Upper ½ return, quite risky	√	√-	√	√
Coffee and tea manufacturing (3.8)	Avg 35.5% (59% + 12%) Upper ½ return, very risky	√	√	√	√-(3)
All other food manufacturing (4)	Avg 35.5% (50% + 43%) Average return, somewhat risky	√	√	√	√
Bottled and canned soft drinks & water (2.8)	Avg 52% (48% + 56%) Average return, somewhat less risky	√	√	no	√-(3)
<b>Wineries (5)</b>	<b>Avg 72.5% √ (79% + 66%) Relative high return and low risk</b>	√	√	√	√
<b>Distillery (4.6)</b>	<b>Avg 59% √ (58% + 60%) Above Average return, somewhat less risky</b>	√	√	√	√-(3)

\*Beverage manufacturing served as a proxy.

Forest Product Sectors with Development Potential.

Sector (# Criteria Met)	Financial Analysis	Regional Minimum Size (jobs)	Regional Strength (Iq)	Regional Growth	U.S. Growth
Wood preservation (2.8)	Avg 47.5% (83% +12%) High returns, very risk	✓	✓	no	√-(3)
Veneer and plywood manufacturing (3.8)	Avg 55.5% (81% +30%) High returns, relatively risk	✓	✓	✓	√-(3)
Wood windows and door manufacturing (4)	Avg 78.5% (53% +21%) Average returns, risky	✓	✓	✓	✓
<b>Cut stock, resawing lumber, and planning (4.6)</b>	<b>Avg 65.5% ✓ (49% +82%) Average returns, low risk</b>	✓	✓	√-(3)	√-(3)
Other millwork, including flooring (2.8)	Avg 65.5% (85% +38%) High returns, risky	✓	✓	no	√-(3)
Wood Container and Pallet Manufacture (4)	Avg 38% (75% +1) High returns, very, very risk	✓	✓	✓	✓
Manufactured (Mobile) Homes Manufacture (4)	Avg 57.5% (78% +37%) High returns, relatively risky	✓	✓	✓	✓

Paper Product Sectors with Development Potential.

Sector (# Criteria Met)	Financial Analysis	Regional Minimum Size (jobs)	Regional Strength (Iq)	Regional Growth	U.S. Growth
Paperboard container manufacture (4)	Avg 42 % (37% +36%) Below average return, risky	√	√	√	√
All other converted paper product manufacturer (3.7)	Avg 66.5 % (42% +91%) Average return, low risk	√	√	no	√-(3)

Furniture Product Sectors with Development Potential.

Sector (# Criteria Met)	Financial Analysis	Regional Minimum Size (jobs)	Regional Strength (Iq)	Regional Growth	U.S. Growth
Wood kitchen cabinet and countertop manufacturer (3)	Avg 50% (69% +31%) Above average return, high risk	√	no	√	√
Upholstered household furniture manufacturer (3)	Avg 28% (31% +7%) Low return, very high risk	√	√	√	no
Other household nonupholstered furniture manufacturer (2.8)	Avg 28% (38% +18%) Low return, high risk	√	√	no	√-(3)
Institutional furniture manufacturer (3)	Avg 21% (31% +11%) Low return, very high risk	√	√	√	no
Custom architectural woodwork and millwork (3)	Avg 36.5% (14% +59%) Very low return, slightly better than average risk	√	√	no	√
Mattress manufacturer (4)	Avg 29.5% (45% +14%) Low return, high risk	√	√	√	√

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