

NC Choices

a Center for Environmental Farming Systems initiative



Food for today. Farming for tomorrow.

Growth in the Niche Meat Sector in North Carolina

Prepared by

Jennifer Curtis
Casey McKissick
Kathryn Spann

for

NC Choices & the

Carolina Meat Conference

Concord, North Carolina

March 25-27, 2011

Introduction

The year 2012 represents a milestone in local and niche meat sales in North Carolina: it will mark the tenth anniversary of the North Carolina Department of Agriculture & Consumer Service's (NCDA&CS) licensing program for farmer meat handlers. On the eve of that anniversary, it is timely to assess the evolution of that segment of North Carolina agricultural production and sales, the contributions of niche meat sales to the local economy and the potential further market opportunities this still-new sector offers to producers, processors, buyers, marketers and allied businesses and organizations. As part of the first-ever Carolina Meat Conference, NC Choices offers this brief overview with the intent that it spark conversation and provide a starting point for measuring growth and trends in years to come.

Meat Consumption & Spending Nationwide

The meat and poultry industry is the largest segment of agriculture in the United States. Total meat and poultry production in 2010 reached more than 92 billion pounds. Americans consumed 298 pounds of meat and poultry per person in 2010, including, per capita, 85 pounds of beef, 73 pounds of pork, 120 pounds of chicken, and 19 pounds of turkey, with both of the latter categories climbing.ⁱ

Per capita spending on meat and poultry rose across the board between 1997 and 2007, as reflected in the following table:ⁱⁱ

| Product | 1997 per capita spending | 2007 per capita spending |
|---------------------------------------|---------------------------------|---------------------------------|
| Beef | \$187.02 | \$270.42 |
| Pork | \$112.78 | \$145 |
| Chicken | \$109 | \$139.45 |
| Turkey | \$18.52 | \$19.92 |
| Total (excluding lamb, etc...) | \$427.32 | \$575.09 |

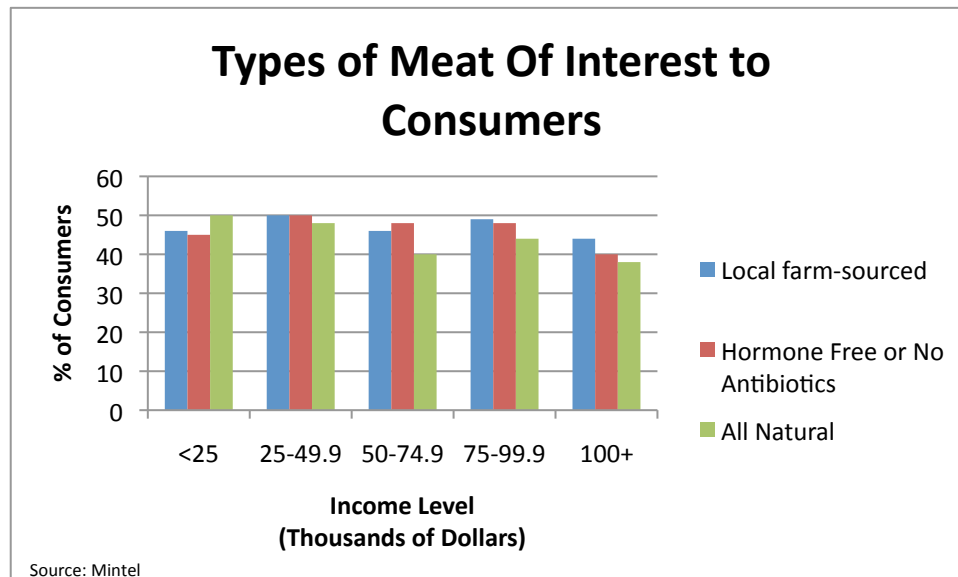
The past two years, however, have seen a slight drop in beef and pork production, mostly due to rising feed costs.ⁱⁱⁱ

Niche Meat Sector Nationwide

What percentage of the meat market is occupied by niche meat sales? Although the government has long tracked statistics for meat production and consumption, no similar comprehensive information exists regarding "niche" meats. What do we mean by "niche?"

Niche meat is marketed using claims that differentiate it in two general ways: superior or unique product qualities, and/or social or credence attributes. These “alternative” attributes of meat respond to increasing consumer concerns regarding environmental impacts, animal welfare, and human nutrition. These include, but are not limited to, the following marketing claims or categories: organic production; grass-fed; pasture-raised; raised without antibiotics or added hormones; cage-free; free-range; heritage breed; and humane husbandry practices. Niche meats, as discussed in this context, also include the increasingly popular claim, “local.” Niche marketing claims are regulated to varying extents.

A 2010 nationwide survey of adults across a range of income levels demonstrates that consumers are particularly interested in three specific attributes that pertain to niche meat. While they regularly shop for premium, U.S.-raised meat without additives or preservatives, consumers express an interest in MORE meat that is: 1) sourced from local farms, 2) raised without antibiotics and hormones, and 3) natural (See Chart Below).^{iv}



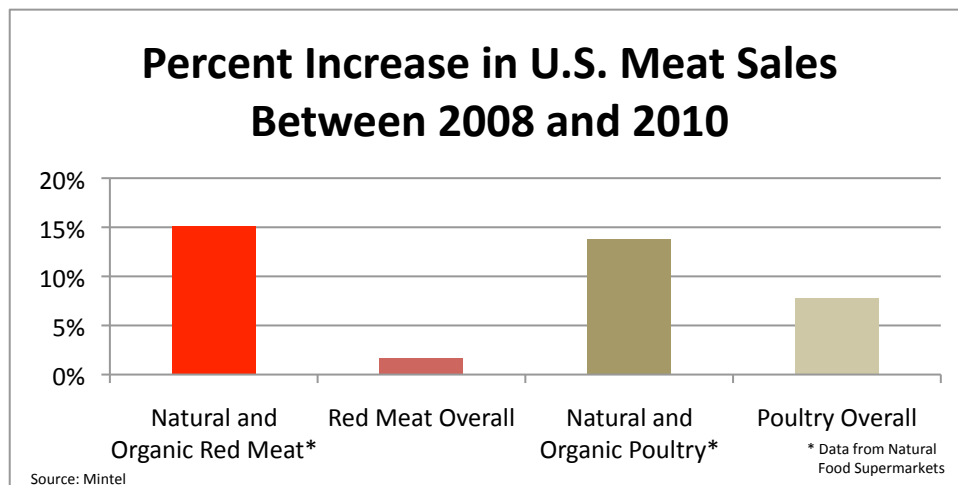
Niche meat production and marketing have offered small-to-medium scale producers one means to diversify revenue sources and compete within a heavily consolidated and vertically-integrated meat and poultry industry. Alternative marketing of niche meat products now appears in a variety of market channels, including direct-to-consumer (e.g., farmers’ markets, CSAs, & buying clubs), retail grocery stores, and restaurants and food-service outlets.

At this time, one of the only sources of information about growth in the niche meat sector is based on what is happening in organic meat production and marketing. This is because there is little tracking of any other type of niche meat as a category. While organic is a small subset of the overall niche meat market, particularly here in North Carolina, it can serve

as a benchmark of consumer demand for non-conventional meats. Nationwide in 1997, 496,385 acres of pasture or rangeland were certified as organic; by 2007, that number had risen to 2,005,015 acres – more than a four-fold increase. Organic livestock production increased dramatically between 1997 and 2007, with a nineteen-fold increase in the number of hogs produced under organic certification, and a 14.5-fold increase in organic beef production. During this time, organic poultry production increased more than 15-fold.^v

Total sales in the organic meat sector, while they occupy a very small percentage of the total meat market (just over half of one percent), grew steadily between 1997 and 2007, with 2007 organic meat sales reaching \$476 million and 2010 reaching an estimated \$618 million.^{vi} In 2007, poultry accounted for 59 percent of this figure, while beef made up 24 percent of these sales. Fifty-four percent of those organic food sales were handled through mainstream grocers, club stores and retailers, while natural and specialty retailers such as Whole Foods captured 40 percent of sales. Direct sales through farmers’ markets, co-ops, community-supported agriculture (CSAs), and the internet, as well as exports, represented the remaining 6 percent.^{vii}

Mintel, an international market research firm, tracks growth in many sectors of our economy, including food and meat specifically. A recent review of meat and poultry sales through natural retail grocery stores, shows what they term the “natural and organic sector” growing at a much stronger rate than conventional meat and poultry sales. While still a very small segment of total meat sales, it is a sector to watch from a growth standpoint.^{viii} Between 2008 and 2010, overall red meat sales increased 1.7 percent whereas natural and organic red meat sales increased by 15 percent. During that same time period, overall poultry sales increased by 7.8 percent, whereas natural and organic poultry sales increased by almost 14 percent (See Chart Below).



Niche Meat Sector in North Carolina

How much of the market for meat products in North Carolina is currently occupied by niche meats? Unfortunately, it is very difficult to measure given the paucity of data available. In the absence of much information, we chose to take a quick look at the production, processing and marketing experience on the ground in North Carolina. We conducted 25 interviews with meat producers, meat processing facilities, farmers' markets, retailers, and administrators within the NCDA&CS with oversight responsibility for the meat handler licensing program and for inspection of processing facilities, as well as research and extension personnel with interests within the niche meat arena. These conversations do indicate significant growth in the niche meat sector in the state, paralleling that of the more documented natural & organic market nationwide. They also highlight certain aspects of customer demand, and challenges and growing pains that this sector is facing.

One persistent theme emerged in these discussions. At least in the alternative markets (such as farmer's markets, buying clubs and even natural foods retailers), which form the backbone of non-organic niche meat sales in North Carolina, "local" appears to have eclipsed other niche meat claims as a catch phrase which buyers (accurately or not) perceive to embody the virtues claimed by other niches: a healthier product produced in a more humane way.

Retailers

Selected retail markets in the state report a surge of demand for locally-sourced meats. Weaver Street Market in Orange County has seen demand for niche meats increase by 10 to 15% per year over the past five years, while their percentage of locally-sourced meat has risen from 25% to 75% of total meat sales. Weaver Street's main focus is sourcing local (preferably within 150 miles of its stores) pasture-raised meats, produced without antibiotics or added hormones. Organic would be a selling point but is simply not available locally in adequate quantities, and "local" has evolved to trump "organic" among their customer base. Although Weaver Street seeks to source their meats as locally as possible, it must sometimes fill in with pork or beef from out of state sources. Increased local sourcing has been made possible by a combination of more producers selling locally, as well as a joint effort with NC Choices. While they've been able to meet their need for 2-3 beef per week, they've found it difficult to source enough local pork, and they have never found an adequate supply of local producers for pastured poultry produced without antibiotics.

Whole Foods, with its large position in the natural foods marketing arena, must work to fill multiple niches within its meat department. It, too, places local purchasing as a high

priority, though to meet their volume of demand and remain true to the other niches which they require their meat to fill, “local” extends to Georgia and Virginia. Whole Foods has its own “5 Step” program for assessing the animal welfare practices of its producers, and labels its meats to indicate which “step” the producer of each product has attained in its husbandry practices. This enables consumers to vote with their pocketbooks, to avoid, if they wish, products produced at lower steps of the rating system.

Farmers Markets

The farmers markets are, in many ways, the front lines of the niche meat market. However, niche meat sales figures through the farmers’ markets and CSAs are especially hard to capture. There is no organized data collection, and even the producers themselves frequently lack records of their sales. The Raleigh State Farmer’s Market started offering permanent year-round week-long spaces for meat and cheese vendors four years ago, and has experienced a steady and still unmet increase in demand for meats. There are currently four permanent stalls of local producers selling various niche meats. Perhaps 50 to 60% of the meat is marketed as grass-fed, and 70% is marketed as having been raised without antibiotics or added hormones, while 80-90% of the poultry is marketed as being at least cage free, if not free range. There is one Animal Welfare Approved producer. The market manager estimates an increase of at least 100% in those niche meat sales since the market developed those stall spaces; and he believes that the market could support further growth in that arena if it had more space. He observes niche meat pricing premiums of 20-30% over conventional grocery meat prices. While pricing has risen perhaps 10 to 15% over the past four years, those increases do not fully reflect increases in grain and transportation costs.

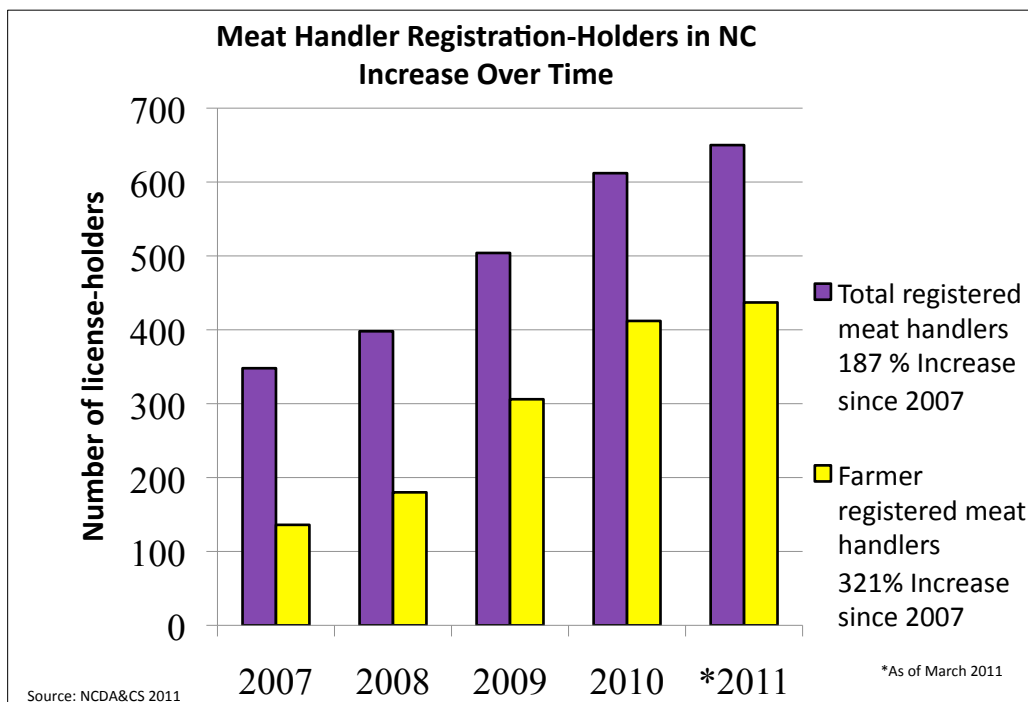
The Charlotte State Farmers Market is a very different market, more akin to locally-run farmers markets in that almost all of its direct sales occur on Saturday. They have 8 to 10 meat vendors who attend regularly, and they typically sell out by 11 a.m. Most of these are niche marketers, such as Baucom’s Best (100% grassfed beef), Grateful Growers (pastured heritage breed pork and poultry), and Profitt Family Farms (a cooperative of farms selling niche beef).

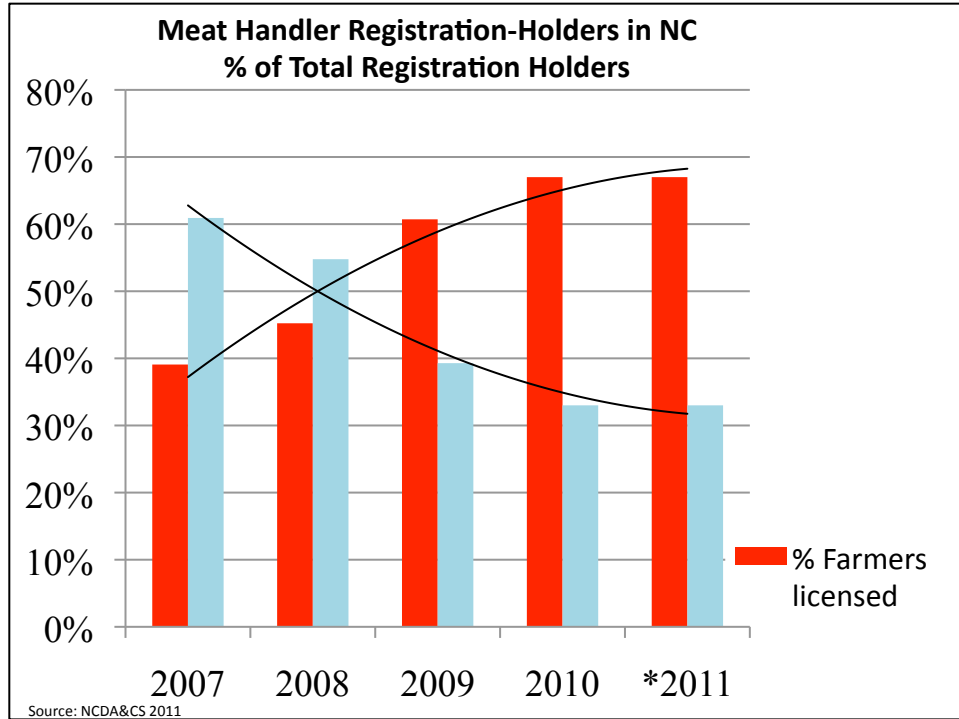
The North Asheville Tailgate Market has four meat vendors (not all of whom sell meat exclusively), who represent about 10% of their total number of vendors. The market manager for the past three years (who has also been a vendor at the market for a longer period than that) notes that as they have added more protein producers, market customers become progressively more likely to purchase their meat at the market. He estimates that the number of customers buying meat at the market has easily doubled over the past five years. He also estimates that sales have increased at that market in no small part due to the market’s move to a larger space, which enabled a wider range of vendors to attend.

The Carrboro Farmer’s Market has been in existence for 32 years, and has included meat vendors for one-third of that time. A quarter of the market’s vendors now include some form of meat or poultry in their offerings. Few of their vendors, however, offer exclusively meat or poultry. None of their meat vendors sell conventional meat products; all market in at least one niche sector. Their vendors are increasingly offering specialty meat products such as cured meats and more exotic products such as pheasant, rabbit and buffalo meat. The market does not track meat sales, but the market manager notes that there has been such a proliferation of meat vendors that the market is not admitting new meat vendors (or permitting existing vendors to add meat to their market mix) unless the product is something that is not already sold at the market.

Meat Processors

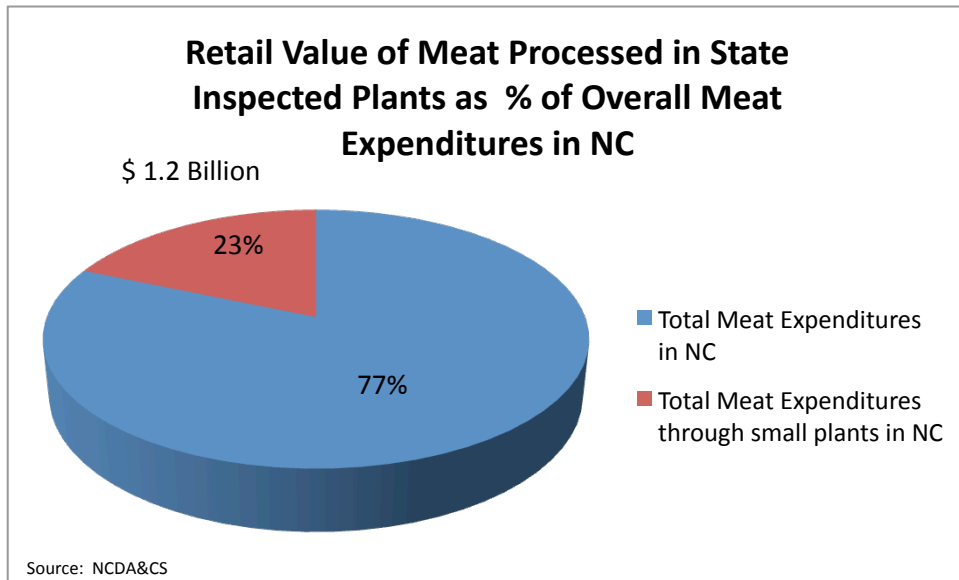
The most helpful data available to evaluate growth in the niche meat sector comes from the NCDA&CS, which reflects a steep increase in the number of farmers securing meat handlers’ registrations—a requirement for transporting and selling packaged, inspected meat. The NCDA&CS first started registering farmer meat handlers in 2002. As of March 2011, 437 farmers held a meat handler’s registration. That number is nearly four times the number of farmer meat handler registrations in 2007. This of course does not indicate how much each producer is raising or selling, but it does show a broadening local production & marketing base (See Charts Below).





The number of farmers slaughtering poultry on farm – current regulations permit the on-farm slaughter of 20,000 birds per year without daily inspection – is also increasing. Currently, more than 60 operators engage in on-farm poultry slaughter for sale in North Carolina.^{ix}

NCDA&CS has additional data that is helpful for understanding the value of small-scale processors to the local food economy. In 2010, NCDA was responsible for inspecting 192 meat and poultry plants, all of which are small and very small plants.^x (These do not include the large meatpacking companies such as Smithfield or Tyson.) Of the 192 plants, 20 routinely do custom work for independent farmers and wholesale distributors. Collectively, state-inspected plants processed over 250 million pounds of red meat and 84 million pounds of poultry in 2010, by market weight.^{xi} These numbers offer one benchmark of meat production in North Carolina outside the realm of the large meatpacking houses but do not provide insight into the extent of meat sales by farmer meat handlers, for example, or the extent of niche meat marketed in the state. Based on average retail prices for beef and poultry, the retail value of meat and poultry processed by NCDA inspected plants is \$1.23 billion.^{xii} For comparison, this represents 23 percent of total meat and poultry sales in the state (See Chart Below).



For the past 10 years, the number of meat processing facilities has stayed relatively stable. A couple of new facilities have opened, but this has been offset by closures. The high cost of entry into the market, extensive regulation, and the difficulty of predicting utilization rates (or volume of business) all effectively deter new facilities. While it is costly to expand an existing slaughter facility, it is even more so to open a new facility, and impossible to accurately gauge the potential volume of business such a new enterprise might find. The lack of any organized or systematized data regarding niche meat production and sales necessarily impedes a would-be operator from even documenting demand/anticipated business necessary to obtain credit.

Processors themselves observe growth across a range of indicators. Mays Meats in Taylorsville reports an increase over the past five years of 50-75% in the number of farmer meat handlers with whom they're working. Currently, they have approximately 100 farmer/meat handler customers, of whom about 20% market with some form of verified niche claim. The number of animals they process, however, has not risen as steeply as the number of meat handlers served, because as farmer meat handlers have increased, the number of homeowners who bring animals in to be processed for their own use has declined, resulting in a net total increase of about 30% in the number of animals processed.

Matkins Meats located in Caswell County, perhaps due to their central location, works with approximately 260 farmer meat handlers – more than any other custom processor in the state. They process 40-50 beef animals per week, 75-100 hogs per week, and approximately 25 lambs per week, as well as an array of other large animals from goat to ostrich (they do not process poultry). Five years ago, they did a fairly small amount of custom work; today, that is

the entire focus of their business. They have seen their business increase by 10-15% a year since they started doing custom work.

Chaudhry Halal Meats in Chatham County works with approximately 50 meat handlers, of whom just a few submit grass-fed or other niche marketing claims to the USDA for label review. Chaudhry's gross revenue from fee-for-service processing, not including processing for his own sales, has increased sharply, up 25% just last year. In terms of animals, this translates to approximately 15-20 beef animals per week year-round, and 600 birds per week from April to December.

Acre Station in Beaufort County works with 50 to 60 farmer meat handlers over the course of a year, up from 3 or 4 farmer meat handlers in 2003. Of these, only a handful seek niche packaging documentation. As the folks at Acre Station note, label documentation is a way to communicate with the consumer; if the farmer is the one doing the selling, he or she can communicate directly with the consumer without having to rely on the label to describe the unique attributes of the product. Much of Acre Station's processing work is for Whole Foods; approximately two-thirds of the 70-80 pigs they process each week is sold through Whole Foods. They handle 6-8 beef animals per week, and a few lambs, but no poultry.

Livestock Producers/Farmer Meat Handlers

The farmer meat handlers see trends in the niche meat industry in the most direct and daily sense. To illustrate the growth that producers are experiencing, we offer a few EXAMPLE profiles of successful producer meat handlers from across the state, all of whom have experienced significant growth in recent years.

Lee and Domisty Menius of Wild Turkey Farm (Rowan County) have been raising meat for direct sale since 1998. They produce a full range of meat products: pork, beef, lamb, goat, chicken, turkey and eggs, approximately 75% of which is sold directly to the consumer. Their pork is Animal Welfare Approved; their meat birds are all pastured, and their beef, lamb and goat is 100% grass-fed, which is unique in the marketplace. They use no antibiotics or added hormones. Last year, they sold approximately 6 pigs a month, 2 beef animals per month, and, when they have it available, 4 lambs a month. Their sales have doubled every year for the past three years. They attribute 25% of that to a simple rise in consumer demand; 25% of it to their efforts to produce more; and 50% of that to their marketing efforts in reaching new people. Lee notes that locally produced food is trendy now in a way that didn't previously exist, opening new market opportunities.

Jamie Ager of Hickory Nut Gap Meats (Buncombe County) started direct marketing meat about 10 years ago. He sells beef, pork, chicken, turkey, and a few goats, with a local and grass-

fed or pastured focus. He sells through a variety of channels, including groceries, restaurants and direct to consumer. They are currently selling 500 beef animals per year, 90% of which is raised by other farmers to their specifications; 450 hogs per year, mostly raised themselves; 800 chickens; 40-50 turkeys; and a few goats. In each of the past two years, his sales to grocery stores have increased approximately 50%; restaurant sales are up 30%; and direct to consumer sales are up 20%. Over the past five years, his pricing hasn't changed much, but he anticipates changes in the near future, particularly in light of the increasing cost of feeder calves. Poultry pricing has increased 5-10% over the past three years.

Coon Rock Farm (Orange County) has been raising meat for sale for 6 years. They produce beef, pork, lamb, goat and free range poultry; their ruminants are all grassfed. Their chickens are heritage breeds, and all their animals are raised without the use of antibiotics or added hormones. They have doubled production every year for the past 5 years, and still can't meet demand. Their pricing has increased 10-20% over this time, but not as much as input costs have increased. Approximately 40% of their sales are wholesale to restaurants, a CSA accounts for another 40% or so, and farmers market sales and internet sales make up the remainder of their production.

Mike Jones of Mae Farms (Franklin County) formerly sold to Whole Foods and Niman Ranch, but has been direct marketing since 2007. He raises pastured pigs, cattle and poultry, which he sells primarily through the Raleigh State Farmers Market. He sells approximately 200 hogs a year, which make up 95% of his business. He now sells twice as much as he did two years earlier. Since he sells at the Raleigh Market, he tries to keep his pricing in line with other producers there, which are on the high end of the range. He has not raised prices except to pass on increased production costs.

V. Mac and Peggy Baldwin of Baldwin Beef (Caswell County) have been in the beef business for many years and began direct marketing grass-fed Charolais beef in 2002. Wholesale sales to retailers and restaurants began in 2007. Their business has increased every year and has grown to involve the whole family. Direct-to consumer sales jumped significantly once they began selling from a retail space off the farm. They see an average of 20 customers per day throughout the week on their farm and offer internet sales and shipping as well. On average, they sell between 4-6 beef per week through wholesale customers.

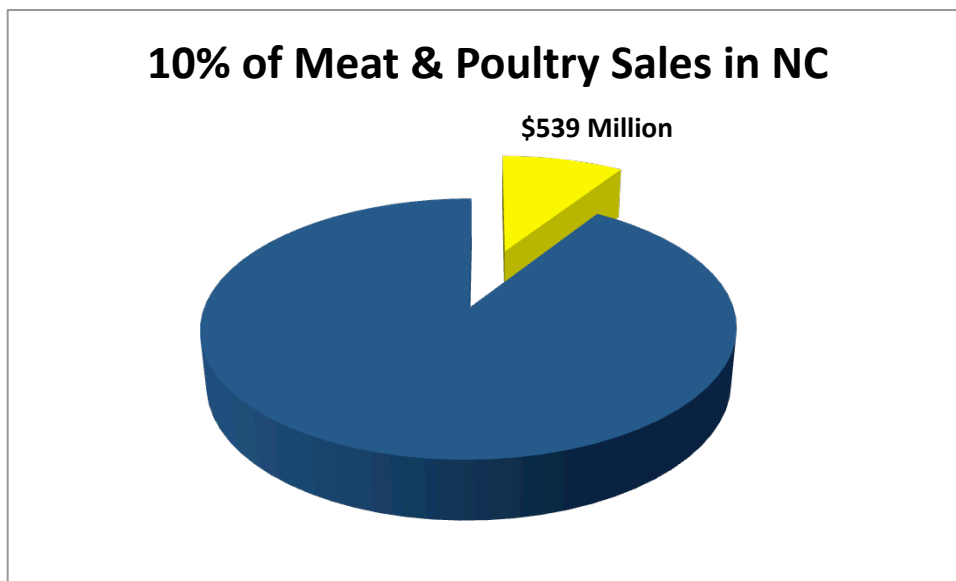
Seth Church (Wilkes County) is the third generation of beef farmers in his family and the first one to move their operation into direct sales of grain-finished beef. Apple Brandy Beef began in 2007 with direct to consumer sales off the farm and through the internet. In 2008 they added wholesale customers, including restaurants and retail grocery stores. In four years, they've quickly developed a variety of markets, tripling their sales. In 2010, they moved 100

beef, including some sourced from neighboring farms using similar genetics and feeding protocols.

Bailey Newton of Triple B Farm (Granville County) started selling meat raised on his farm eight years ago and has seen his sales more than triple in that time frame. Bailey's farm exemplifies diversity, integrating a wide variety of species. In 2010, Bailey sold 15 beef, 25 hogs, 4 lamb, 800 chickens and 50 turkeys. Bailey sells 75 percent of the meat he raises direct to consumers at a farmers market / off the farm and the remainder to wholesale customers.

Opportunities & Challenges

One way to consider the potential market opportunity in North Carolina for the niche meat industry is to look at the dollar value of 10 percent of meat sales in the state. The Center for Environmental Farming Systems (CEFS) in collaboration with NC Cooperative Extension, has established a 10 percent campaign (www.nc10percent.com) calling upon individuals, organizations and businesses to dedicate 10 percent of their food dollars to local food. Each year in North Carolina, we spend \$5.39 billion on meat and poultry (approximately 15 percent of total food spending). Ten percent of that total is a potential market for local and niche meat of \$539 million a year (See Chart Below). One advantage to meeting the 10 percent challenge with local meat purchases is meat's year-round, rather than seasonal, availability.



As the niche meat industry reaches to capture this market opportunity, it faces a number of challenges. Producers face the challenges of production, combined with additional time entailed in marketing and selling, as well as the challenge of communicating their distinct

characteristics in the marketplace, all of which require very different skill sets than those involved in raising the animals. Determining pricing can be a challenge, because even in an area with other vendors who help set the market price, the farmer still must accurately assess the cost of their own inputs and labor. Custom processing is costly, particularly compared to industrial-scale processing, and consumes much of what would otherwise be profit. Small-scale, customized processing costs per animal are intrinsically more costly than the processing costs of larger-scale operations due to the smaller volume, the lower amount of automation, the need to process animals differently for different customers, and the higher labor costs, where each employee at a custom plant must be able to perform a broader range of tasks than at an assembly-line style industrial processing facility.

Expansion for niche meat producers can be costly; in the case of pasture-based production systems, the producer must lease or purchase more land and potentially incur fencing costs to expand herd size. Producers of premium products also face duplicity by other vendors in the marketplace. In navigating regulatory hurdles, many producers feel constrained on the one hand from using some marketing claims, such as organic or grass-fed, due to the costs and time involved in obtaining the “official seal of approval” to use those claims; and fear unintentional misuse. Conversely, producers feel squeezed on the other end by other market players’ willingness to pass off conventional product under niche labels. In other words, producers who play by the rules feel that there is a combination of too much regulation and too little enforcement of the regulation that exists.

Many producers cite challenges to securing a reliable quality of processing from their processors. Where errors are made in processing, particularly on product intended for wholesale to restaurants or food service providers (vs. direct to consumer), the producer faces a steep loss in value for the product, one which cannot be recaptured. Niche producers also face many of the same challenges as conventional producers: weather, transportation and fuel costs, fluctuating feed prices, and a rising cost of livestock.

Processors face their own set of challenges. They daily see a rapidly growing custom market, but are unsure of the extent to which this growth will be sustainable, or conversely will plateau or even collapse. One processor notes that there is enough demand to expand his business significantly but fears doing so may result in a loss of service and quality, which he views as his hallmark. Well-trained employees with a broad knowledge of areas, from retail cuts to packaging, are essential in a business in which each customer has specific needs in how their animal is processed. Small-scale, independent processors often do not offer or have access to comprehensive training programs for meat cutters. Many consider it too costly to invest in training because their staff turnover rates are high. Another processor cites the high

turnover in inspectors; new inspectors come in with their own individual interpretations of HACCP procedures, which de-stabilizes production routines in an already highly variable context.

Retailers who handle any volume cite the difficulty of sourcing adequate local product, particularly pork and poultry, with consistent supply and quality.

The most difficult group to assess is customers, and there is very little data on this topic. They face significant challenges in navigating a maze of marketing claims in an arena that is both highly regulated and only modestly policed. Anecdotal evidence indicates that many consumers have an increasing desire for a “greener” meat product, but cannot determine which marketing claims will lead them to the best product for their premium price. Commodity meat brands have embraced niche label claims on grocery store shelves and through branded meat lines. This presents both a challenge and an opportunity to the niche meat sector, one which it will need to address if it is to secure a long-term share of the broader marketplace.

There are a variety of indicators that may point the way to a continued expansion of market share for niche meat products – the same indicators that have driven the steadily expanding organic market. Food safety, both in on-farm production practices and in processing, looms ever larger in the list of consumer concerns. Consumers who purchase meats directly from the producer at farmer’s markets may enjoy a higher level of trust in their sources, assuming the producer is conducting business with transparency. However, true “scaling up” of the niche meat industry must include multiple ways for consumers to make purchases and trust their sources, in addition to direct farmer-to-consumer sales. Food safety concerns of traceability are also minimized in the direct market context – a factor that can be expected to continue to be a driver of the expanding demand for locally produced foods.

Concluding Thoughts

This brief look at the niche meat sector indicates North Carolina is experiencing significant growth in step with national trends. There appears to be considerable market opportunity and consumer interest. Notably, as this industry grows, it will continue to experience a range of pain points in reaching to satisfy consumer demand. An important observation from this assessment is the need for much more information and credible data to track growth in the niche meat sector, both nationally and at the local level. Why? Such data help provide evidence to lenders and investors interested in supporting the development of infrastructure and new businesses to help scale the local meat industry. They help foundations and granting agencies prioritize local, niche meat as a worthy area that can create jobs and support rural economic development. They help policymakers and elected officials understand

the importance of this industry and the need for regulatory programs to support it. They help extension and research personnel justify the allocation of resources toward production, processing and market research related to this industry. And they help tell the story to the media and others who are able and interested in educating consumers about the value and benefits of niche meat and its role in North Carolina. Collecting these data will require that everyone along the supply chain—farmers, processors, buyers, distributors, and including regulators and allied professionals—do their part to support a more thorough analysis of this growing industry.

ⁱ U.S. Red Meat and Poultry Forecasts (January 25, 2011), USDA Economic Research Service, available at www.ers.usda.gov/publications/ldp/xlstables/RMPFORE.xls; U.S. Census Bureau 2010 Census data, available at <http://2010.census.gov/news/releases/operations/cb10-cn93.html>.

ⁱⁱ American Meat Institute Fact Sheet: U.S. Meat and Poultry Production and Consumption: An Overview (April 2009), available at www.meatami.com/ht/a/GetDocumentAction/i/48781.

ⁱⁱⁱ The Hightower Report, *Livestock Outlook for 2010* (January 4, 2010).

^{iv} Mintel. November 2010. Innovations/Types of Meat of Interest to Consumers. Figure 63.

^v Organic Production Data Set, USDA Economic Research Service (September 14, 2010), available at <http://www.ers.usda.gov/data/organic/>; and Dimitri et al., Marketing U.S. Organic Foods: Recent Trends from Farms to Consumers, USDA Economic Research Service (September 2009).

^{vi} Dimitri et al., Marketing U.S. Organic Foods: Recent Trends from Farms to Consumers, USDA Economic Research Service (September 2009); personal communication with Carolyn Dimitri, March 22, 2011.

^{vii} Food Facts, Organic Trade Association, available at <http://www.ota.com/organic/mt/food.html>, accessed March 13, 2011.

^{viii} Mintel. November 2010. Market Size & Forecast for Red Meat & Poultry.

^{ix} Personal communication with Don Delozier, North Carolina Department of Agriculture & Consumer Services, March 4, 2011.

^x This includes custom plants (for private sale; must be labeled not for re-sale), Talmadge-Aiken plants (federal mark of inspection and can engage in interstate commerce) and state plants (can only be sold & shipped) within the state.

^{xi} NCDA&CS Meat and Poultry Inspection Information Statement, available at <http://www.ncagr.gov/meatpoultry/info.htm>.

^{xii} U.S. Beef and Cattle Industry: Background Statistics and Information,” and “Background Statistics on U.S. Broiler Industry,” USDA Economic Research Service, available at <http://www.ers.usda.gov/news/BSECoverage.htm>.