Interim Report
KY Beef – UK Dining Committee
Submitted June 6, 2016

The Kentucky Beef – UK Dining Committee was formed jointly by Dean Nancy Cox and UK Executive Vice President Eric Monday in January 2016. Their charge was to examine supply chain opportunities for Kentucky beef in order to increase the supply to the UK Dining market. Initially, emphasis was to be placed on hamburgers for the student dining venues.

Initial committee membership, as well as new or added participants, is listed at the end of this report. The Committee in full met on two occasions to date, and many discussions have been held among sub-groups throughout the spring semester. While hamburger sourcing for UK Dining has remained central to these discussions, the complexity of beef supply chains has fostered consideration and study of a very wide range of issues in beef production, processing, distribution, marketing and consumption.

Since the formation of our Committee, there have been significant developments in ground beef sourcing at UK, as well as in KY beef processing and marketing channels. We provide this report to UK and UK Dining leadership as a summary of current status and of our progress to date. Our intent is also to invite comment and direction as we continue this work. The interim report is organized in three sections:

1) Opportunities and Obstacles for Kentucky Farm-Sourced Beef at UK Dining
2) Current Status of Ground Beef Sources at UK
3) Studies Underway

Opportunities and Obstacles for Kentucky Farm-Sourced Beef

Assets:

The obvious abundance of beef cattle on Kentucky farm fields might lead many to underestimate the challenge of producing, processing and marketing "local" beef products, all within Kentucky. Kentucky is widely cited as the largest beef cattle production state east of the Mississippi. With about a million beef cows, Kentucky's herd is, in fact, smaller than several states to the west. However, beef production is a leading element of Kentucky's farm economy, and larger than all other eastern states.

Sustaining an excellent forage base for grazing animals is another important asset; Kentucky climate and soils are highly favorable for productive pastures.

Kentucky is also the largest cattle marketing hub in the eastern half of the U.S. Bluegrass Stockyards, headquartered in Lexington is among the nation's largest cattle markets.

Kentucky cattle farms are abundant, yet typically small. With about 38,000 cattle producers, we rank 5th in the nation. This is one reason for strong organizational support and leadership for the cattle industry in Kentucky, including the Kentucky Cattlemen's Association and UK Cooperative Extension and research. The Department of Agriculture, with substantial funding from the Kentucky Agricultural Development Board has built a widely recognized state branding program for Kentucky foods and farm products (Kentucky Proud).

Over the last 10-15 years, substantial on-farm investment in cattle genetics, nutrition, and production infrastructure have been matched by multi-million dollar funding from the state's Agricultural Development Fund. An enhanced reputation for beef cattle quality in the national market has been one important result.

The Ag Development Fund has also supported significant private investment in new regional scale slaughter and processing facilities for beef and other livestock in Kentucky. Marksbury Farm Market, the Chop Shop and Trackside Butcher Shoppe have all begun operations within a 100-mile drive of Lexington during the last decade. Summit Meat Processors is scheduled to begin operations in Pulaski County in the immediate future. Kentucky is reported to have approximately 19 plants which can do USDA-inspected slaughter.

Finally, consumer demand for local food products is growing in Lexington and Louisville. The agreement between UK and Aramark has catalyzed much discussion of regional sourcing for larger scale markets.

<u>Obstacles:</u>

While Kentucky produces a very large number of beef calves, few of them complete their lives here. Calves are sold at market directly from pasture and not long after weaning, transported to large feedlots in central states to our west, slaughtered and processed at large plants nearby. Then the beef products are distributed back to Kentucky and much of the rest of the globe.

The "cow-calf" model is dominant and built into almost all Kentucky farm plans and practices. Many Kentucky beef farmers (perhaps most) have no interest in retaining or finishing these calves on their own farm. For sound reasons, farmers may not choose to make the labor or infrastructure changes required. Transporting calves to the stockyard generally will be simpler and less time consuming than marketing finished beef, key factors for small or part-time cattle farmers. The economics of retaining or finishing cattle on a scale possible for most Kentucky farms are uncertain. Questions about the relative financial risk of alternative production models are often critical, and the answers are seldom clear. Our Committee plans to continue addressing these issues and, hopefully, create tools useful for farm planning.

The excellence of Kentucky grasslands is likely to be less of an asset for value-added cattle production than it is for high-value horses. It is generally assumed that a large majority of U.S. consumers prefer the taste of grain-finished to grass-finished beef. Differentiated markets for grass-finished beef do exist; see Table 1 for examples (with prices) available in this region. Even the widespread confusion and conflict about "grass-fed", "grass-finished", "vegetarian diet", and other label language may in itself create a barrier for some value-added beef models.

Although physical capacity for beef slaughter and processing has significantly increased in Kentucky, substantial barriers remain. At a regional or local scale, slaughter and processing costs are far greater than they are at much larger facilities to our west; preliminary discussions within our Committee suggest that regional scale costs may be 3 times more. This alone might add \$.50 – \$1.00/lb. to the cost of the final meat product. Beyond lacking the expected economies of scale from operating at constant, high volumes regional processors see little or no income (or incur costs of disposal) from hides, offal, bones, etc. (the drop). Other processing challenges for regional scale processors may include inconsistent quality, matching work schedules to farm delivery schedules, availability of skilled and consistent meat cutters, and/or significantly greater USDA inspection costs per animal.

Food cost margins are tighter for large institutional markets (e.g., a large university campus) than for markets (e.g., white table cloth restaurants, direct farm sales) that have already seen greater success for source-identified meat products. Examples of successful source-identified or otherwise differentiated beef are easily found, even if they remain a very small fraction of all beef sales. However, price differentials for such protein products are large, frequently 2 times or more the cost of commodity counterparts. This is illustrated by our quick survey of ground beef prices shown in Table 1.

While UK Dining is a highly visible market, and large relative to most restaurants currently sourcing local product, it is not as large a potential market for Kentucky farmers as many have assumed. UK Dining has estimated that at full operations they purchase about 1,100 pounds of ground beef per week (K-Lair 230 lbs. patties, Blazer and FFC- 600 lbs. patties, FFC- 300 lbs. bulk). All other Aramark Higher Ed accounts in Kentucky use about the same total amount. This might be equivalent to a market for a portion of 4-10 cattle/week. Will this market alone be sufficient to support the creation and continuation of a new, stable farm-processor-distributor supply system?

Our current U.S. food supply chains have been shaped over several decades by both economic factors and consumer expectations. Most beef, particularly ground beef, moves through global supply chains to highly price-competitive markets (including university cafeterias). Such supply systems have evolved to meet food service providers' requirements for food safety, quality, on-site preparation efficiency and supply – with very competitive pricing. However, large scale institutional food service providers and their distributors, for the most part, have yet to create such supply systems for differentiated (source, quality and price) beef. Beef requires multi-step processing, packaging and handling; often leading to more layers of producers, processors and distributors than may be the case for local fresh produce or shelf-stable foods. Complex supply chains from farm to consumer may inhibit the flexibility and communication often required for Farm to Table beef sourcing, even apart from price considerations.

Current Status of Ground Beef Sources at UK

Since assuming responsibility for UK Dining in 2014, Aramark has evidenced commitment to addressing the supply chain challenges described above for Kentucky farm-sourced beef. Multiple sources and suppliers have been given a trial on campus, specifically at the K-Lair. This section reports on the progress of such initiatives.

In reviewing this information, we learned that the differences in food sourcing requirements and constraints among the campus venues are key considerations. Food sourcing for the multiple franchise operations is not addressed in the UK Dining contract and not determined by Aramark. Among those venues operated by Aramark, cost factors are significantly different for “cafeteria/swipe” locations, like Fresh Food Company, than they are for “retail/cash” venues such as K-Lair.

During much of the spring semester 2016, UK Dining served hamburger patties for K-Lair which contained 75% Kentucky farm-sourced beef. Estimated sales over a 3 month period appear to be roughly 300 lbs./week.

The K-Lair patties are now being supplied by Clem’s. Clem’s is a very local (1 block off-campus) KY Proud distributor of refrigerated meat which does some simple processing, including grinding, mixing, and patty making. Also, during the first year of the Aramark contract Clem’s supplied hamburger patties, but their source of beef at that time was commodity beef, as widely reported, sourced internationally. For the current product, beef cuts are purchased from Boone’s Butcher Shop (Bardstown, KY). Clem’s mixes and adjusts the fat ratio to specifications using 75% Boone’s beef and 25% trim or commodity beef.

Boone’s purchases Kentucky-raised cattle either at the regional stockyard or directly from local farmers. They seek younger cull cattle, but report not having a consistent program for finishing or other production practices. Cattle are slaughtered and processed under USDA inspection at Boone’s facility.

Steven Clem estimates that the cost of this beef is $1.00-1.50/lb. more than commodity beef. This is not greatly different than the differential cost per hamburger serving (1/3 lb.) estimated by UK Dining. Quality characteristics of this product are reported to be acceptable and superior in taste, texture and handling to other sources that have been used.

Throughout the 2015-16 academic year, UK Dining also purchased bulk ground beef sourced from Kentucky farms. This was sourced from the Chop Shop in Southeastern Kentucky and delivered to UK by Critchfield’s and then Piazza. This provides ground beef “chubs” at the Fresh Food Company used for burritos, chili and the like.

Patties for Blazer and Fresh Food Company continue to be supplied by Sysco. Therefore, somewhat less than half of the ground beef used by UK can be classified as KY-farm sourced.

Earlier this year, a trial of Chop Shop-produced patties was conducted at K-Lair. Omni, a meat co-packer in Bowling Green, also contributed to production (grinding and making patties) and Sysco was the distributor in this supply chain, which is no longer active at UK.

As a part of the KY Beef Committee project, we have conducted initial interviews with all current and recent producers and suppliers of UK Dining's KY farm-sourced beef.

For a historical perspective, see the following link about a 2008 "Hamburger Alliance" initiative to introduce Kentucky farm-sourced hamburger at UK Dining: http://news.ca.uky.edu/article/sustainable-%E2%80%98hamburger-alliance-benefits-farmers-uk-students This beef was produced by the Green River Cattle Company and patties were made at Clem's. The product was not well received by campus customers and was discontinued within the year. GRCC later ceased operations in 2009.

Studies Underway

The following studies, highly relevant to addressing the Committee charge, have been initiated recently. All should be completed during the 16-17 academic year.

1) Budget models and cost analyses for Kentucky production/processing of cattle systems potentially appropriate for ground beef customers like UK Dining. Conducted by Drs. Kenny Burdine and Greg Halich of the Department of Agricultural Economics.

2) Taste panels and perception comparisons of various sources and types of ground beef patties. Led by Dr. Gregg Rentfrow, Department of Animal and Food Sciences, with funding support from the Food Connection.

3) Surveys of students and on-campus customers to evaluate knowledge, perceptions and willingness to pay for differentiated beef sourcing. Conducted by Lee Meyer and Wuyang Hu with Food Connection support.

4) The Capstone Beef Project- The UK Butcher Shop and The Food Connection have collaborated with Capstone Farms and the Chop Shop to acquire the highly graded beef from 5 cattle grown and finished on a Kentucky farm under a high level of well documented management practices. We plan to use this beef for taste comparisons, prototype "KY Farm-Sourced" marketing trials and other research and education purposes.

5) The Food Connection staff is continuing literature reviews and collection of case studies for niche, alternative, or differentiated beef markets around the nation.

ATTACHMENTS

Table 1: Comparative Prices for Ground Beef

(As listed between 2/18-22/2016)

Vendor	Source	Sold as:	$/lb.
Wholesale			
Clem's (web site)	Not specified	patty: 10 lb. case	2.60
	80/20 ground beef, least cost listed		
Sysco (buyer's site)	Not specified	patty: 100x4 oz., case	2.40
	basic 75/25 ground beef, no TVP or seasoning		
Creation Gardens (web)	KY farm-source identified	patty: 6x6 oz.	6.22
	"local, sustainable" grass raised, corn finished		
Marksbury (buyer's list)	Farm-source (their program)	patty (any size)	5.95
	grass fed and finished, no antibiotic/hormone, humane certified		
Retail (store or on-line)			
Kroger	Not specified	3 lb. bulk	2.99
	In-house ground beef 27% fat, least price available		
	Laura's Lean Beef	bulk, lb.	7.99
	96% lean,4% fat		
Lucky's Market	"Iowa Premium Beef"	3 lb. bulk	2.99
	"100% Black Angus, Raised on family farms, Signature corn-fed flavor"		
	Also a sign nearby stating all beef is hormone free "never, ever"		
Good Foods	Marksbury	bulk ground beef, lb.	7.99
	"grass fed and finished"		
	Pike Valley	bulk, lb.	8.99
	"Organic and grass fed"		
Elmwood (web site)	KY Farm-sourced	bulk, lb.	7.50
	organic, grass fed and finished, ground beef		
Bureau of Labor Statistics	Consumer retail historical price tracking, Jan. 16		3.98
	Cited as in city average for ground beef, 100% beef		
	http://data.bls.gov/timeseries/APU0000703112?data_tool=XGtable		

Committee Membership:

Initial Appointees

Scott Henry, UK , co-chair	Scott Smith, CAFE & Food Connection, co-chair
Melody Flowers, UK EVPFA office	Dave Maples, Kentucky Cattlemen’s Assoc.
M.K. Cole, UK Dining	Jim Akers, Bluegrass Stockyards
Kenny Burdine, UK Ag Economics	Lilian Brislen, Food Connection
Nick Carter, Cooperative Extension	Gregg Rentfrow, UK Animal and Food Sciences
Greg Halich, UK Ag Economics	

Added Participants

Katelyn Hawkins, Kentucky Cattlemen’s Assoc.

Lee Meyer, UK Ag Economics

David Neville, Beef producer, Capstone Farms