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**Survey of Kentucky Beef Producer
Perspectives on Food Safety**

by

Kenneth Burdine and Matthew Ernst
Lee Meyer and Timothy Woods

University of Kentucky
Department of Agricultural Economics
400 Charles E. Barnhart Bldg.
Lexington, KY 40546-0276

Phone: 859-257-5762

Fax: 859-323-1913

<http://www.uky.edu/Ag/AgEcon/>

Mr. Burdine may be contacted by e-mail at: kburdine@uky.edu

Mr. Ernst may be contacted by e-mail at mernst@uky.edu

Dr. Meyer may be contacted by e-mail at lmeyer@uky.edu

Dr. Woods may be contacted by e-mail at tawoods@uky.edu

Kenneth Burdine and Matthew Ernst are Extension Associates in the University of Kentucky Department of Agricultural Economics. Tim Woods is Associate Extension Professor of Agribusiness Management and Lee Meyer is Extension Professor of Livestock and Meat Marketing in the University of Kentucky Department of Agricultural Economics. Staff papers are published without formal review. Views expressed are those of the authors and do not necessarily reflect the view of the Department of Agricultural Economics, the College of Agriculture the University of Kentucky, the Agricultural Experiment Station, or the Cooperative Extension Service.

Introduction

Food safety has become a major issue in agriculture. Consumers are increasingly aware of the risks associated with the United States food supply and are demanding more information about the production and safety of the food they eat. The University of Kentucky recognizes the importance of food safety as we progress agriculture in the 21st century and is working to develop a better understanding of this issue.

In order to evaluate farmer perceptions of food safety as they relate to the beef industry, a survey was conducted among Kentucky beef cattle producers. A four-page survey was sent to roughly 1500 farmers that were members of the Kentucky Cattlemen's Association. The goal of the survey was to determine the extent to which beef producers felt their practices could affect the safety of the food supply.

Producers were asked demographic questions about themselves and their operations. They were asked about animal identification such as ear tagging and source verification. Producers were then asked about their use of by-product feeds and feed additives and the risk that they perceived from the use of those products. Finally, producers were asked to evaluate the overall risks associated with beef consumption and how the typical US consumer views that risk. In total, 570 beef cattle producers responded to the survey.

Respondent Demographics

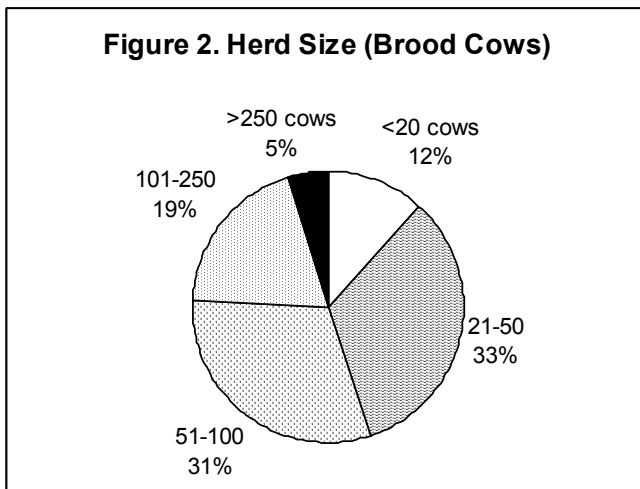
The age of producers responding to this survey reflects an aging beef producer population in Kentucky. Nearly half the responding producers were over 60, with 75% of the producers over 50 (Figure 1). More than 97% of the producers responding had been raising cattle for more than 10 years.

Respondents were split almost evenly between full-time (51.5%) and part-time (48.5%) farming. It should be noted that, while farming status was split evenly, only 40% of respondents indicated that they derived more than 50% of their income from farming. This

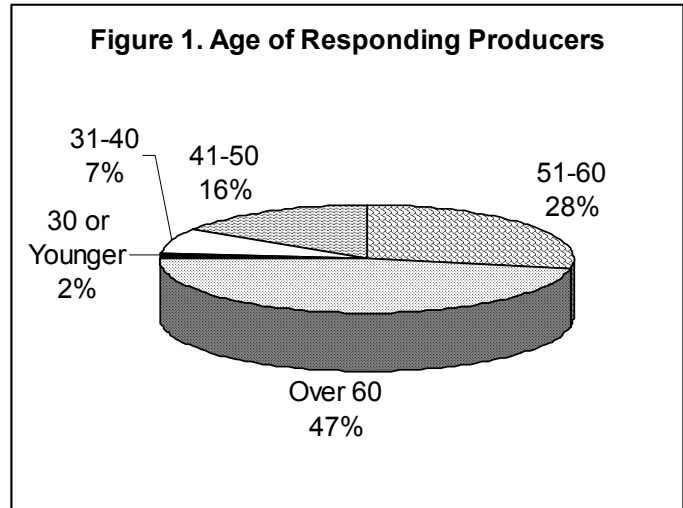
is again most probably reflective of the age of the respondents, who may derive substantial portions of their income from retirement and/or transfer payments while continuing to farm full-time.

Three-quarters of producers surveyed identified “commercial cow-calf” as their primary enterprise. Herd size usually ranged from 21-100 cows (Figure 2). Producers could check more than one category as their primary enterprise. Thus, 25% of producers indicated “purebred cow-calf,” 18% indicated “backgrounder/stocker,” and 2.5% of the producers indicated finishing was their primary enterprise.

Reported farm size was consistent with the majority 21-100 cow herd size. Over half (52%) of respondents indicated they used between 50 and 200 acres of hay and pasture in their operation. Producers using 200-500 acres comprised 27% of the sample. The number of producers using less than 50 acres (12.3%) was similar to the number using more than 500 acres (8.4%) of hay and pasture in their operation.



cow/calf producers, over 50 years old, and farm less than 200 acres. The attitudes and perceptions reported here are primarily reflective of this group.



The most recent (1997) Ag Census data report 55% of Kentucky’s beef farms having less than 20 cows. The majority of Kentucky’s beef sales, however, are generated by farms with more than 20 cows. This suggests that producers who responded to this survey are among those comprising the majority of Kentucky’s beef production.

This survey is thus a representative sample of larger Kentucky beef producers. These individuals are typically commercial

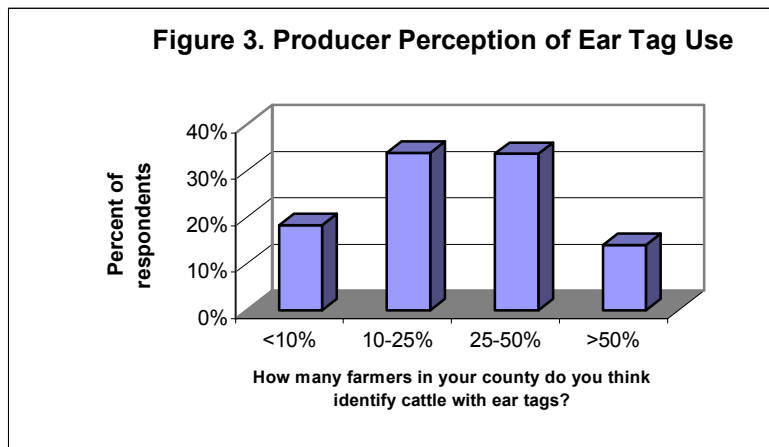
Production Practices: Animal Identification

Ear Tags

The majority of producers surveyed (82%) use ear tags to identify their cattle. An additional 25 respondents (4.6%) who did not currently use ear tags indicated that they planned on starting to use ear tags within the coming year. Only nine of the 100 producers who reported that they did not use ear tags indicated they used some other means of identification. This suggests that 91 (17%) of the producers surveyed currently use no means of individual identification for their cattle.

The percentage of producers actually using ear tags is sharply contrasted against their perception of the percentage of producers “in their county” using ear tags (Figure 3). Only 14% of producers surveyed thought that more than 50% of farmers in their county used ear tags to identify cattle.

The percentage of producers reporting ear tag use is much greater than producer perceptions would indicate. One explanation for this contrast is that smaller producers (<20 cows) are less likely to use ear tags. Our sample supports this claim because only 19 of the 62 producers (31%) with herd sizes fewer than 20 cows indicated ear tag use.



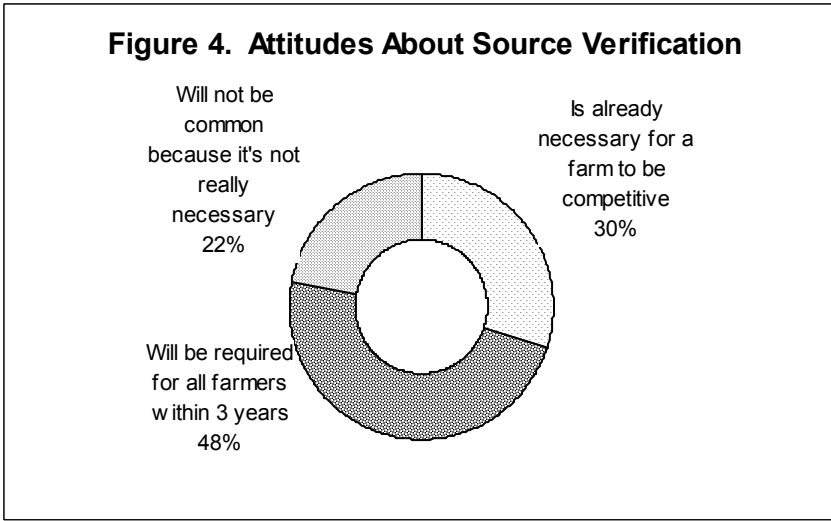
To summarize, about 90% of the producers in this survey use or plan to use individual animal identification. While the actual percentage of beef producers using ear tags is probably lower than the 82% indicated in this survey, larger producers (who account for the majority of beef production) appear to be consistently utilizing individual animal identification.

Source Verification

Slightly more than one-third (35%) of producers responding to questions concerning “Source Verification” were unfamiliar with the term. However, when responding to whether or not they would support voluntary source verification, 89% of the respondents said yes. This indicates that there were some producers unsure of what source verification was but who would support voluntary compliance. There was nearly an even split (46% for, 54% against) between those responding to whether or not they would support required source verification.

Table 1. Producer Support For Source Verification

<i>Producers Familiar With the Term</i>		<i>Producers Unfamiliar with the Term</i>	
Support Voluntary SV	94%	Support Voluntary SV	74%
Support Required SV	53%	Support Required SV	27%



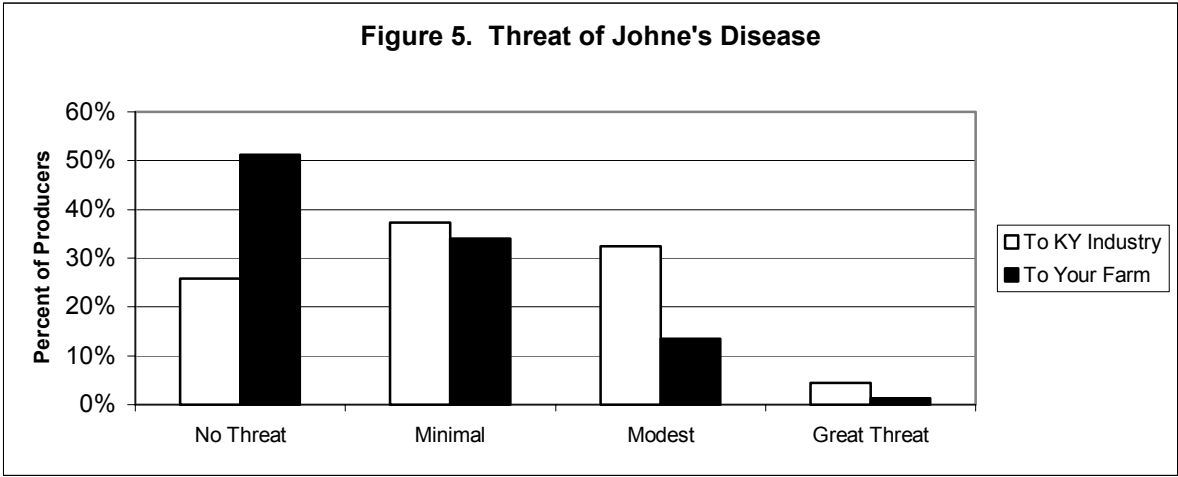
Among the 406 producers responding to a question about attitudes concerning source verification, 30% believed the practice “is already necessary for a farm to be competitive.” Almost half (48%) believed source verification “will be required for all farmers within three years,” while 22% believed that source verification “will not be common because it is not really necessary” (Figure 4).

The diversity in views about source verification indicates some need to clarify what the practice is and why it is important. Further education about what this term entails is needed before producers will be able to respond as to whether it is necessary.

Johne’s Disease

Producers were asked to rate their perception of Johne’s disease as a threat to the Kentucky cattle industry and to their farm. Although 51% of the producers indicated that Johne’s disease presents no threat to their farm, only 26% said Johne’s disease poses no threat to the Kentucky cattle industry. Producers were rather evenly divided over whether Johne’s disease presented a “minimal” or “modest” threat to the Kentucky cattle industry (Figure 5).

This response indicates that the producers have confidence in their individual ability to curb the threat of Johne’s disease. However, they do not appear to have as much confidence in the ability of the industry as a whole to curb this threat. Based on this contrast, we can conclude that Johne’s Disease is less of a threat to the Kentucky cattle industry than producers perceive.



Use and Perceived Risk from By-Product Feed Ingredients

Producers were asked to rank their use and the potential food safety risk level of eight by-product feed ingredients (Table 2). Between 461 and 497 producers responded to each question. Predictably, feather meal and poultry litter were ranked as having the most food safety risk. Producer use of these two by-products, however, was less than 3%. Use was far greater for the other by-products (excluding hominy), which were all ranked as having significantly less risk.

Table 2. Use and Perceived Risk of Feed Ingredients (Percent of those responding)

	Use on Farm		Potential Food Safety Risk Level		
	Use	Do Not Use	High Risk	Low Risk	No Risk
Feather Meal	1.0%	99.0%	38.2%	51.9%	9.9%
Poultry Litter	2.9	97.1	51.7	41.5	6.8
Soybean Hulls	44.9	55.1	0.9	14.3	84.8
Corn Gluten Feed	41.0	59.0	1.4	20.7	77.9
Dried Distiller's Grains	33.4	66.6	1.0	22.4	76.6
Wheat Middlings	12.2	87.8	1.0	18.4	80.6
Hominy	2.2	97.8	1.4	22.2	76.5

Disease Impact and Drug Use

Disease Impact

Producers were asked to rank the top five of eight diseases in order of the impact the disease had on their cattle in the past five years. Three of the eight diseases listed (black leg, *E. coli*, and leptospirosis) were consistently ranked by Kentucky producers as having had the most impact on their cattle during the past five years. The diseases are ranked by order of impact (5=most impact, 1=most impact) in Table 3.

Of the eight diseases, only campyola might be classified as an insignificant problem for Kentucky cattle producers. Only four producers ranked it as a “top-five” disease problem over the past five years.

Table 3. Disease Impact

Black leg	3.17
E coli.	2.60
Leptospirosis	2.39
Vibriosis	1.37
Salmonellose	0.85
Johne's	0.72
Listeria	0.39
Campyola	0.06

5=most impact, 1=least impact

Drug Use

Producers were asked whether they used five drug products (therapeutic antibiotics, ionophores, antibiotics, vitamins, and implants) and their perceived risk of each product leaving a residue. Most of the producers who responded that they did not use each product did not proceed to rank the level of risk for each product, so only a general perceived risk figure can be calculated. The majority of producers ranked the products listed as “low” or “no” risk (Table 4).

Antibiotics and implants were perceived as having slightly greater risk than the other products, but less than 15% of respondents ranked any product as “high risk.” Cattle producers are comfortable with these products, and are confident that the risk of these products leaving a residue is minimal.

Table 4. Use and Perceived Risk of Drug Products (Percent of those responding)

	Use on Farm		Potential Residue Risk Level		
	<i>Use</i>	<i>Do Not Use</i>	<i>High Risk</i>	<i>Low Risk</i>	<i>No Risk</i>
Therapeutic Antibiotics	68.6%	31.4%	13.4%	69.0%	25.4%
Feed Additives					
Ionophores	36.1	63.9	5.2	54.5	40.3
Antibiotics	62.9	37.1	13.2	63.7	36.3
Vitamins	76.6	23.4	2.1	28.7	69.3
Implants	65.1	34.9	9.5	54.2	36.3

Overall, producers showed minimal concern about the threat that drug residues pose to the beef industry and to their farms. Only 19% of respondents rated drug residues as a high threat to the industry; 59% saw drug residues as a low threat and 22% saw drug residues as posing no threat.

Producers considered residues less of a threat to their individual operations. Only 3% considered residues to be a high risk for their operations, while 24% saw residues as a low risk, and 73% saw them as no risk.

Figure 6. Farmer Perception of Drug Residue Threat to Cattle Industry

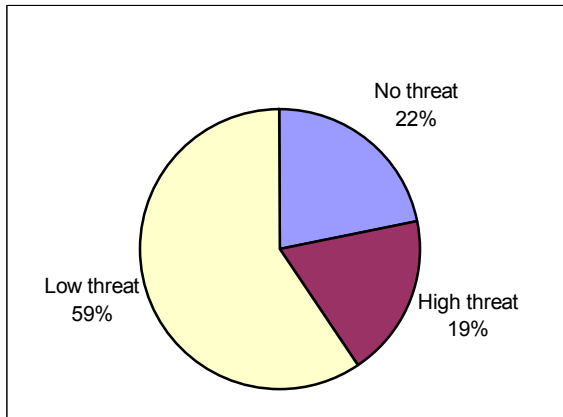
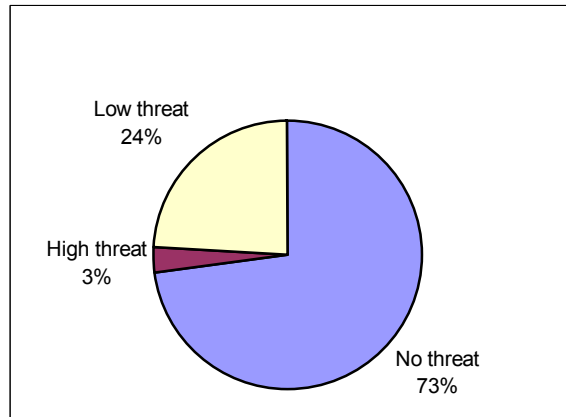


Figure 7. Farmer Perception of Drug Residue Threat to Their Operation



Marketing

Producers were also asked some marketing questions as part of the survey. When asked what factor has the most impact on their profitability, producers ranked calving rate as being most important. The least important factor was herd size (Table 5).

Table 5. Production factors by level of importance to farm profitability

Calving rate	1 st	Most important factor
Animal sale weight	2 nd	
Health program	3 rd	
Genetics	4 th	
Carcass quality	5 th	
Breed	6 th	
Herd size	7 th	Least important factor

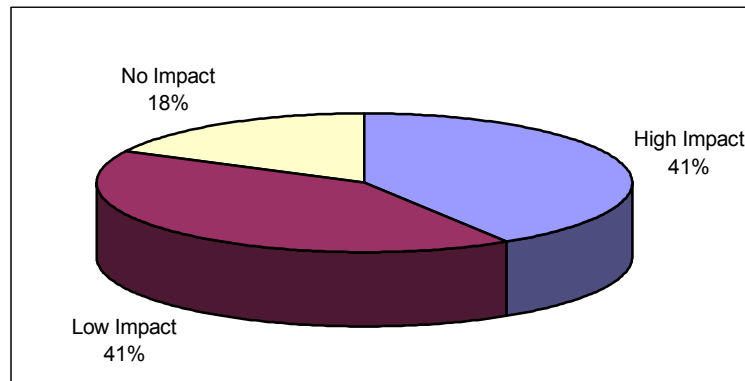
Producers were also asked what types of production and marketing programs would be the best source of product differentiation and added value over the next five years. More than half of the surveyed producers were interested in quality certified programs. Origin labeling and value added products were also common responses. Organic products received the least amount of interest.

Table 6. Percent of Producers Showing Interest in the Program

Quality certified products (CAB or Laura's Lean)	55.4%
Origin labeling (Kentucky beef)	42.8%
Special value added products	38.2%
No added hormones	33.0%
Grass finished beef	25.8%
Organic	14.6%

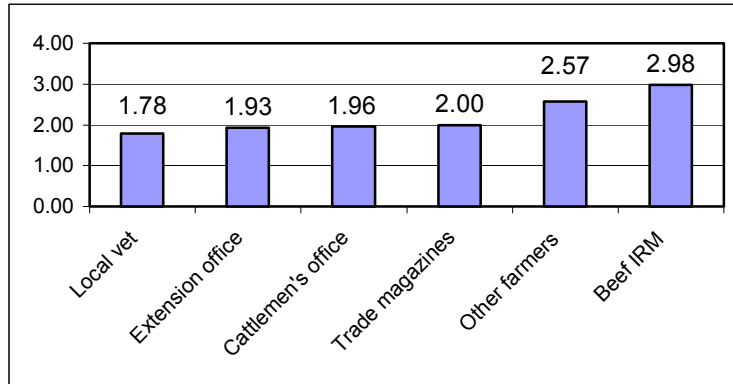
Only 9.5% of surveyed producers indicated that they sold any cattle as freezer beef directly to the consumer. However, responses revealed that beef cattle producers take their role in food safety seriously. Over 40% felt their practices had a high impact on food safety, less than 20% indicated that their practices had no impact on food safety.

Figure 8. Impact of Farmer Production Practices on Food Safety



Producers indicated that local veterinarians were their primary source of information about management practices as they related to food safety. County extension offices, the cattlemen’s association, and trade magazines were also relatively important. Less important information sources were other farmers and beef “Integrated Resource Management” book.

Figure 9. Farmer Sources of Food Safety Information by Frequency of Use



(1 = primary source, 2 = occasionally, 3 = seldom, 4= never)

Overall Impressions

Responses were quite varied when producers were asked if they would support a research program on food safety to improve the demand for beef. Producers were most interested in the program if it were funded by a check-off. Using a general tax or Phase I money was considered less desirable (Table 7).

Table 7. Farmer Support of a Food Safety Research Program

Source of funding	Yes	No	Maybe
By general tax money	36%	37%	27%
By Phase I money	41%	24%	35%
By a check off	57%	13%	30%

On average, surveyed producers considered Kentucky beef to be slightly safer than beef from other parts of the United States. Respondents also indicated that beef from the United States was much safer than beef coming from other countries.

Figure 10. Farmer Perception of Beef Safety by Origin (0 = poor, 10 = most safe)

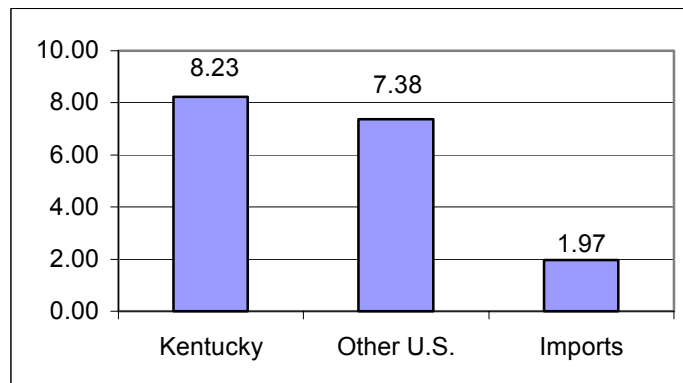


Table 8. Producer perception of risk from beef consumption

Causes of death	Number of deaths / year / 1,000,000
Car accident	240
Homicide	90
Accidental fall	49
Fire	28
<i>Perception of US consumer risk from other foods</i>	--
<i>Perception of US consumer risk from beef consumption</i>	--
Electrocution	3
<i>Personal risk from other food</i>	--
Lightning	.5
<i>Personal risk from beef consumption</i>	--
Meteorite	.00006

Producers were asked to complete a risk ladder by indicating their perception of personal risk from the consumption of beef and from other foods. They also indicated how they felt the typical US consumer would evaluate these same risks. In all situations, the perceived risk from food consumption was minimal, less than the risk of death by fire. Producers did feel that consumers saw these risks as being greater, but in both instances, risk from beef consumption was considered to be less than risk from other foods.