EXPANDING MARKETS FOR FLORIDA MEAT GOATS

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INTRODUCTION

Since 1986, Florida A & M University and the University of Florida have cooperated in research to analyze existing markets and develop new markets for goat meat. This paper summarizes the extensive marketing research that has been conducted by the Florida Agricultural Market Research Center (FAMRC) and suggests future marketing strategies for the rapidly growing Florida meat goat industry.

SUMMARY OF MARKET RESEARCH

The research conducted by the FAMRC in recent years has focused on two broad areas: market channels and consumers. Elements of the marketing channels included livestock auctions and dealers, meat wholesalers, food retailers, and restaurants. Consumer research began with focus group interviews in Tampa and Jacksonville, which explored basic attitudes toward goat meat and culminated with 600 consumers comparing barbecued goat with beef. Each major phase of our research is discussed below.

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1This paper was presented at the State Meat Goat Conference by Mr. David Locascio, former Research Assistant with the Florida Agricultural Market Research Center.
Livestock Auctions and Dealers

Initial research examined marketing activities at the first level beyond the farm gate. Managers of all livestock auctions in north and central Florida were interviewed, along with livestock dealers that were identified as handling significant numbers of meat goats. Auction managers reported that many goats were sold directly to individuals, presumably for slaughter; they reported that such sales were particularly brisk around major holidays. Several independent livestock dealers handling goats were found to be buying goats from local auctions, transporting them to the Tampa and Orlando areas, and feeding them until they could be sold on the hoof to individuals. Dealers also reported that most sales occurred near holidays. According to dealers, most sales were to ethnic customers, primarily American blacks, Hispanics, and Haitians. Based upon the survey of auction managers and independent dealers, we concluded that few, if any, Florida-produced goats were entering commercial marketing channels. The next surveys sought to learn more about goat meat sales in the commercial market, i.e., sales by traditional meat wholesalers and food retailers.

Meat Wholesalers and Food Retailers

Because of the large concentrations of ethnic populations in Dade, Broward and Hillsborough counties, these areas were selected for telephone surveys of meat wholesalers and food retailers. Telephone Yellow Pages and Chain Store Guide’s Directory of Supermarket Grocery and Convenience Store Chains were used to identify the firms headquartered or operating within the three counties.
Of 164 meat wholesalers interviewed, only 24 (15 percent) were found to be selling goat meat. Twelve firms had previously sold goat but had quit: inadequate supplies was a frequent reason for discontinuing the product. Nearly 80 percent of the wholesalers (128 firms) had never sold goat meat. Total annual goat meat sales by the 24 firms handling the product were estimated at 840,000 pounds, which amounted to approximately one-fourth of a pound per person per year in the three-county area. About half went to retail grocers, one-third to restaurants, and about 10 percent to varied foodservice operations such as ships, labor camps, and jobbers serving foodservice outlets. Approximately six percent was sold directly to individuals.

Executives of 17 retail food chains representing 622 stores were also interviewed by telephone. Six of the smaller chains were found to be selling goat meat, but only in stores located in areas serving large ethnic populations. Only 28 stores of the 622 controlled by the 17 retail chains offered goat. Average sales per store amounted to 40 pounds per week.

The wholesaler and retailer surveys both revealed limited distribution and low volumes sold through retail food stores. Further, many wholesalers and retailers had limited knowledge of goat meat, and many exhibited negative attitudes toward it as well. Additionally, the surveys indicated that goat meat supplies through commercial channels are erratic, and quality is also variable. Prices at wholesale and retail levels were also found to be low, relative to live goat prices received by most Florida producers.

We concluded that large-scale market development would require product standardization (grading) and more dependable supplies. We also concluded that it would be in the best interests of Florida producers to explore market
development opportunities outside of the traditional commercial wholesale-retail marketing channel.

At this juncture, we wanted to evaluate restaurants as a viable market outlet for Florida goats. However, we felt it was essential to learn more about consumer attitudes toward goat meat and to obtain realistic product evaluations from consumers prior to conducting a survey of restaurant managers.

**Consumer Research**

Initially, little was known about consumers' attitudes toward goat meat or their evaluations of goat meat outside of taste panel laboratory settings. Several palatability studies had been conducted, comparing goat with beef, pork, lamb, and even horse, but standardized laboratory cooking methods used for all species appeared to put goat meat at a disadvantage. A major objective was to obtain more appropriate product evaluations by having consumers evaluate goat meat cooked by barbecuing, a cooking method routinely used by consumers and many foodservice establishments.

**Product Evaluations**

Barbecued beef was used as a control or benchmark against which the goat meat was compared. Both the goat and the beef were prepared under commercial conditions by a restaurant which specializes in barbecued meats. The beef samples, taken directly from the stock of the restaurant, were from whole bottom rounds which had been cooked at 225°F for ten hours. The goat meat, obtained from ten Spanish goat carcasses ranging from 17 to 39 pounds, was cooked for two to eight hours, depending on the thickness of cut. The entire goat carcass was used. After cooking, all samples were deboned, trimmed of
exterior gristle and fat, and cut into half-inch cubes. All samples were then stored at 38°F. until needed, from two to four days. According to the manager of the restaurant that prepared the samples, this refrigerated storage period is well within the norm for storage of cooked beef barbecue by many restaurants.

Product evaluations were conducted in Tampa and Jacksonville. Samples of 300 consumers were obtained in major shopping malls in each city. The 600 participants were screened to include those over 18 years of age, those that had eaten some type of barbecue within the past year, and those that had patronized a full-service restaurant at least once in the previous month. After respondents were qualified in the malls, they were taken to market research firms' headquarters, where they were given product samples and interviewed by trained, professional interviewers in privacy booths. Each person was asked to evaluate one-ounce samples of both the goat and the beef. Samples were identified only by the letters "L" and "T," and the order in which they were presented to participants was rotated to minimize order bias. Respondents were not told what types of meat were being evaluated. Only three respondents insisted upon knowing the types of meat; the remaining 97 percent did not know. The samples were heated to serving temperature in a microwave oven in individual plastic cups prior to evaluation. No sauce was used during preparation or serving, but salt was available for respondents' use if desired.

Consumers were asked to rate the goat and beef samples with respect to tenderness, smoked flavor, meat flavor, and juiciness on a five-point semantic differential scale where 3 represented the ideal and 1 and 5 represented defined extremes (Table 1). Although both goat and beef were both judged to be slightly too tough and slightly too dry, the mean ratings
for tenderness and juiciness for beef were nearer the ideal, and the
differences between goat and beef were statistically significant. With
respect to smoked flavor, mean ratings indicated that both products needed
additional flavor. However, the ratings for goat and beef were statistically
different, and the rating for goat was nearer the ideal. Ratings for meat
flavor were very similar for both products; mean ratings were very near the
ideal, but both were judged to be slightly bland (Table 1).

Table 1.—Consumer ratings of selected organoleptic attributes of goat meat
and beef.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Goat</th>
<th>Beef</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenderness</td>
<td>2.29</td>
<td>2.45b</td>
</tr>
<tr>
<td>Smoked flavor</td>
<td>3.34b</td>
<td>3.71</td>
</tr>
<tr>
<td>Meat flavor</td>
<td>3.30</td>
<td>3.26</td>
</tr>
<tr>
<td>Juiciness</td>
<td>2.44</td>
<td>2.59b</td>
</tr>
</tbody>
</table>

*Ratings were made on the basis of a five-point semantic differential scale where 3 represented "just right" and the extremes were defined as follows:

Tenderness: 1 = much too tough; 5 = needs to be tougher
Smoked flavor: 1 = much too smoky; 5 = needs much more smoke flavor
Meat flavor: 1 = much too strong; 5 = needs much more meat flavor
Juiciness: 1 = much too dry; 5 = much too juicy

*Paired t tests were used to compare mean ratings for goat and beef. Superscripts are placed on mean values nearest the ideal rating of 3 where the differences between ratings for goat and beef were statistically significant at the 0.05 level.

Smell and composite ratings for "overall taste" and "overall appeal"
were made using a scale where 10 represented excellent and 0 extremely poor.
The goat meat received slightly better average ratings on all three
c characteristics, but the difference between goat and beef ratings was
statistically significant only for smell (Table 2). Examination of the
"overall appeal" ratings revealed that nearly 42 percent of the respondents
preferred the goat, 38 percent preferred the beef, and 20 percent were indifferent, giving identical ratings to the two products.

Table 2.--Consumer ratings of selected characteristics of goat meat and beef.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mean ratings&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Goat</td>
</tr>
<tr>
<td>Smell</td>
<td>6.1&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Overall taste</td>
<td>5.94</td>
</tr>
<tr>
<td>Overall appeal</td>
<td>5.69</td>
</tr>
</tbody>
</table>

<sup>a</sup>Ratings are based upon a numeric scale where 10 = excellent and 0 = extremely poor.

<sup>b</sup>Paired t-tests were used to compare mean ratings for goat and beef. Superscripts are placed on mean values nearest the ideal rating of 3 where the differences between ratings for goat and beef were statistically significant at the 0.05 level.

Respondents were also asked to rate the suitability of the two products for an occasional family meal served at home, as a special meal for friends, and as a restaurant meal. Ratings for goat and beef were very similar for all three types of meals. It appears that both products were viewed as being more acceptable for family-at-home meals than for special entertaining or as restaurant meals (Table 3).

Table 3.--Suitability of goat and beef barbecue for selected types of meals.

<table>
<thead>
<tr>
<th>Meal type</th>
<th>Mean ratings&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Goat</td>
</tr>
<tr>
<td>Occasional family meal, at home</td>
<td>5.18</td>
</tr>
<tr>
<td>Special meal for friends</td>
<td>4.63</td>
</tr>
<tr>
<td>Restaurant meal</td>
<td>4.60</td>
</tr>
</tbody>
</table>

<sup>a</sup>Ratings are based upon a numeric scale where 10 = excellent and 0 = extremely poor. Paired t-tests were used to compare goat and beef ratings for each type of meal. None was found to be statistically significant at the 0.05 level.
Prior to being told what two types of meat they had evaluated, respondents were asked whether or not they would buy products similar to the samples in a restaurant or in a retail food store. Slightly over half said they would buy the goat barbecue in a restaurant, 46 percent said they would not, and three percent were undecided. Fewer respondents were willing to buy the beef. Forty-seven percent indicated a willingness to buy the beef, virtually the same percentage was unwilling, with nearly six percent undecided (Table 4). Nearly two-thirds of all respondents were willing to buy both the goat and the beef for an at-home meal, while approximately one-third were unwilling (Table 4).

Table 4.--Consumers’ willingness to buy goat and beef barbecue in food stores and restaurants.

<table>
<thead>
<tr>
<th>Type of outlet/Response</th>
<th>Goat (Number)</th>
<th>Goat (Percent)</th>
<th>Beef (Number)</th>
<th>Beef (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restaurant:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes, would buy</td>
<td>307</td>
<td>51.2</td>
<td>282</td>
<td>47.1</td>
</tr>
<tr>
<td>No, would not buy</td>
<td>274</td>
<td>45.7</td>
<td>283</td>
<td>47.2</td>
</tr>
<tr>
<td>Unsure</td>
<td>18</td>
<td>3.0</td>
<td>34</td>
<td>5.7</td>
</tr>
<tr>
<td>Totals</td>
<td>599</td>
<td>100.0</td>
<td>599</td>
<td>100.0</td>
</tr>
<tr>
<td>Food store:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes, would buy</td>
<td>382</td>
<td>63.8</td>
<td>374</td>
<td>62.4</td>
</tr>
<tr>
<td>No, would not buy</td>
<td>201</td>
<td>33.6</td>
<td>198</td>
<td>33.0</td>
</tr>
<tr>
<td>Unsure</td>
<td>16</td>
<td>2.7</td>
<td>27</td>
<td>4.5</td>
</tr>
<tr>
<td>Totals</td>
<td>599</td>
<td>100.0</td>
<td>599</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Percentage does not sum to 100.0 due to rounding.

After the blind (unidentified) product evaluations had been completed, respondents were told that one product was goat and one was beef. Only 51 percent correctly identified goat, 41 percent incorrectly identified the beef as goat, and eight percent were unsure. Only 25 percent of all respondents had previously eaten goat meat. The product evaluations tended to confirm
our initial hypothesis: that goat meat, properly prepared, would compare very favorably with beef.

**Consumer Attitudes**

While the product comparisons between goat and beef were very positive, it is important to realize that prevailing consumer attitudes toward red meat, and goat meat in particular, might adversely affect consumption of goat. Consumer attitudes were explored in focus group interviews conducted in Tampa and Jacksonville, and also during each of the 600 consumer interviews. Several negative factors were identified that could impair market development efforts for goat meat, but there were some positive findings as well.

There is a pervasive perception among consumers that red meat is "bad" for health; this perception has manifested itself in dramatically reduced beef consumption in recent years. This continuing downward trend could negatively impact goat as well, unless there is documentation that the nutritional composition of goat meat is superior to other red meats such as beef and pork. Another commonplace perception is that goats are cute little animals that belong on idyllic farms, in nursery rhymes or in petting zoos, rather than on the dinner table. Several focus group participants expressed their disgust with the idea of eating goat, saying "It’s like eating a pet ... like a dog or cat." Another relatively common negative perception is that goats are smelly scavengers. Some people have gotten the impression that goats will eat anything from tin cans to tires, and trash consumption results in inedible or poor quality meat. Still another negative image persists among older men that served in World War II. These ex-servicemen
say they were fed strong-smelling, foul-tasting "goat" (probably mutton) during the war when shortages of beef, pork and poultry were common.

Fortunately, there are many positive images of goat meat as well. On the positive side, many consumers have a perception that goat's milk is especially nutritious and, therefore, goat meat should be healthful as well. Another positive finding was that, when asked to describe the kind of restaurant most likely to serve goat meat, many focus group participants felt that "trendy," "upscale" restaurants would likely serve goat. Of the 600 taste panel consumers, the majority described restaurants selling goat meat in positive terms, such as "clean," "well maintained," "moderately priced," "tastefully decorated," and "in a nice part of town." Negative restaurant associations were expressed by a minority of respondents.

Names commonly used in the industry for goat meat were also examined. Using a psychological word association technique, the 600 consumers in Tampa and Jacksonville were asked for first impressions of "chevon," "cabrito" and "goat." Additionally, each respondent was asked to indicate the social class of people that would consume each of the items. In general, "chevon" and "cabrito" received more favorable associations than did "goat." Additionally, "chevon" and "cabrito" were generally associated with higher social classes than "goat" (Table 5). The implications of these associations are clear for the goat industry: "chevon" and "cabrito" project a better image than "goat," and these or other fanciful names should be encouraged on menus and in promotional activities whenever possible.
Table 5.--Consumers' associations of selected goat product names with social class.

<table>
<thead>
<tr>
<th>Class</th>
<th>Chevon</th>
<th>Cabrito</th>
<th>Goat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(---Percent---)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>12.7</td>
<td>7.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Upper middle</td>
<td>33.6</td>
<td>17.0</td>
<td>10.4</td>
</tr>
<tr>
<td>Middle</td>
<td>40.7</td>
<td>55.3</td>
<td>36.5</td>
</tr>
<tr>
<td>Lower middle</td>
<td>7.8</td>
<td>15.6</td>
<td>27.8</td>
</tr>
<tr>
<td>Low</td>
<td>4.2</td>
<td>5.1</td>
<td>23.5</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Percentages are based on 599 observations.

The Restaurant Survey

The consumer research provided considerable insight for a viable market development program for goat meat. One of the most significant (and promotable) findings was that goat meat received very favorable evaluations relative to beef. Further, consumers' images associated with goat meat sales in restaurants were predominantly positive. Although the 600-member consumer panel judged the goat and beef samples somewhat more appropriate for an at-home meal than a restaurant meal, the fact remains that the barbecued beef product is currently very successful.

Another reason for choosing market development through restaurants was the relatively low incidence of prior consumption of goat meat by the 600 panelists (25 percent). Consumers that had never tried goat meat would be unlikely to purchase the raw product in a food store because of limited knowledge of proper cooking methods. However, in a restaurant, many consumers might be tempted to try goat meat when prepared properly and presented as an exotic appetizer or entree. Thus, a mail survey of foodservice establishments in Florida was conducted to determine the current level of market penetration of goat meat in the foodservice sector, the level
of knowledge about goat meat among foodservice operators, and the likelihood of additional goat meat sales in Florida foodservice outlets.

The sample was drawn from a list of approximately 33,000 licensed foodservice establishments provided by the Florida Department of Business Regulation. Examination of the list resulted in identification of 630 restaurants that were thought to serve barbecue, based upon their names. An additional 630 restaurants were randomly selected for the survey.

Twelve percent (157 firms) responded to the mail questionnaire. Only five restaurants (approximately three percent) were found to be selling goat meat. Five additional restaurants had sold goat meat within the previous two-year period, but had discontinued. Inadequate, unreliable supplies and variable quality were major reasons given for quitting. There were no statistically significant differences between the barbecue restaurants and the randomly selected restaurants with respect to proportions offering or discontinuing goat meat.

The survey indicated that most restaurant managers know little about goat meat. Most were uncertain about preparation and cooking methods, the availability of supplies, quality, or potential impacts on their sales and profitability. Nearly one-third of the managers felt that goat meat would complement their menus, and one-third were uncertain. Nearly half felt that consumer reaction to goat meat items on their menus would be negative, and one-third were uncertain of consumers' potential reactions.

Despite the managers' lack of knowledge and uncertainty, there was considerable interest in adding goat to their menus. About ten percent said they were "extremely" interested and nearly 20 percent said they were "moderately" interested in serving goat meat. Approximately 25 percent expressed "slight" interest, and 46 percent said they had no interest in
including it on their menus. When asked how likely they were to start
serving goat meat within the next year, eight managers (about five percent)
said they definitely would, and an equal number said they "probably would,"
associated with a 0.75 probability. About 20 percent said there was about
a 50-50 chance they would serve goat within a year. About one-fourth of
those responding said they "probably would not" (0.25 probability of serving
goat), and approximately 44 percent said they "definitely would not" serve
it.

Managers were also asked which of several names would have the greatest
appeal to their customers. "Cabrito" was preferred by slightly over 40
percent, "chevon" by approximately 40 percent, and "goat meat" by 18 percent.

The restaurant survey provided a strong indication of interest in goat
meat among foodservice managers, but it also underscored several problems
that must be overcome before widespread market development activities are
initiated. The major problems are limited supplies, lack of quality
standards, and lack of knowledge among restaurant managers. Despite these
problems, it appears that there is a significant proportion of restaurants
willing to offer goat meat on their menus. However, their interest would be
short-lived if supply and quality problems persist.

SUMMARY AND CONCLUSIONS

Our research has shown that few Florida-produced goats are entering
commercial marketing channels. Very limited quantities of goat meat are
being marketed through meat wholesalers, food retailers, and prospects for
enlisting enthusiastic support from these traditional meat marketers appear
dim. However, market development opportunities for goat meat are very
bright. The consumer evaluations were very positive, and significant numbers
of restaurant managers are interested in putting goat on their menus. Once consumers are introduced to properly prepared goat meat in restaurants, they may wish to buy goat through retail food stores.

The Florida meat goat industry should proceed with caution, however. Before generating a lot of enthusiasm in the foodservice sector, meat goat producers should have the capacity to provide adequate supplies of high quality meat at reasonably stable prices. Finally, producers should also begin to dispel negative images related to goats through various public relations and educational activities directed at restaurant managers and the general public as well. Development of a coordinated marketing program is essential for continued success of the Florida meat goat industry.