

**ETHNIC LAMB BUYING AND PREPARATION  
BEHAVIOR AND PREFERENCES**

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Agribusiness, Food, and Consumer Economics Research Center (AFCERC) Commodity Market Research Report No. CM-01-11, January 2011 by Dr. Gary W. Williams, Dr. Oral Capps, Jr., Dr. Victoria Salin, Dr. Senarath Dharmasena, Dr. Lindsey Higgins, Mr. William J. Thompson, and Dr. David Anderson.

### **ABSTRACT**

To position the American Lamb Board for developing marketing and promotion plans targeted to the growing number of ethnic lamb consumers in this country, this study develops new and strategically important information on this key lamb consuming segment of the population. The survey results provide the first information available anywhere on the demographic and behavioral characteristics of the U.S. ethnic lamb-consuming population. Profiles of ethnic consumers most likely to exhibit key lamb purchasing and buying behaviors are developed and the U.S. ethnic population is segmented into various sub-groups of ethnic consumers for purposes of tailoring promotion programs.

### **ACKNOWLEDGEMENTS**

This report was prepared under contract with the American Lamb Board (ALB). We gratefully acknowledge the helpful assistance of various ALB members. We are particularly indebted to Mr. Scott Pearson, Compliance, American Lamb Board who provided names and primary contacts for the research team in various cities where we conducted the surveys and reviewed our contact lists to help us focus on the most useful contacts. We are also deeply grateful to the many individuals who assisted us in many ways in conducting the surveys in every city where we went, particularly Omar and Suzy Mady of American Halal Meats, Inc. in Newark, New Jersey; Ronnie Berry, owner of Ronnie Berry's Halal Meats in Dearborn, Michigan; and the Rababeh brothers (Abdul, Yasseen, and Mike), owners of Berry & Sons, Rababeh Islamic Slaughterhouse in Detroit, Michigan. We also acknowledge the critical assistance of Matthew Parmerlee, AFCERC student worker, in developing the survey contact lists, compiling the survey results, and creating many of the tables and charts to display the survey data. Robin Hanselman, AFCERC research assistant, provided editorial assistance and developed the extensive supplement to this report. The views, opinions, and conclusions expressed herein do not necessarily reflect those of the American Lamb Board, the U.S. Department of Agriculture, or Texas A&M University. The authors are solely responsible for any errors and omissions.

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## **ETHNIC LAMB BUYING AND PREPARATION BEHAVIOR AND PREFERENCES**

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### **EXECUTIVE SUMMARY**

Perhaps the most important change in the U.S. lamb market over the last several decades is that lamb consumption is no longer declining despite the continued decline of U.S. sheep and lamb inventories and meat production. A recent study (NAS, 2008) suggests that U.S. consumers increasingly can be divided into two groups – a small group who consume lamb on a more or less consistent basis and all the rest who eat little or no lamb at all. Growing evidence suggests that the current divergence of lamb consumption from trends in domestic production may be due to the lamb demand of the growing number of ethnic consumers in this country.

Despite accounting for only 35% of the U.S. population in 2008, minority populations accounted for about 58% of the total U.S. lamb consumption that year (Shiflett, Williams, and Rogers, 2010). If current ethnic population growth rates continue, lamb consumption could grow exponentially over the next 40 years. Thus, meeting the current and future lamb requirements of ethnic consumers is perhaps the greatest competitive challenge and opportunity facing the U.S. lamb industry today. The key to successfully encouraging ethnic consumers to direct their growing demand towards domestic rather than foreign sources of lamb, however, is to understand their lamb needs and purchasing behavior to more effectively design and target promotion programs. Unfortunately, little information has been available on the socio-demographic characteristics of ethnic consumers who purchase lamb, how, where, and why they buy lamb, the specific characteristics of lamb that they value, the factors that drive their purchasing behavior, or their comparative perceptions of the acceptability of domestically produced and imported lamb for their needs.

To position the American Lamb Board for targeting promotion efforts to the growing number of ethnic lamb consumers in this country, this study develops new and strategically important information on this key lamb consuming segment of the population. Through face-to-face interviews by a team of highly qualified sheep and lamb marketing experts with ethnic consumers in the major geographical areas of the country where they live, this study provides new insights on ethnic lamb consumer buying and preparation behavior and preferences. After reviewing the research methodology implemented in the study, this report provides a demographic profile of the survey respondents and then a question-by-question analysis of the survey responses. Profiles of ethnic consumers most likely to exhibit key lamb purchasing and buying behaviors are then developed and the U.S. ethnic population is segmented into various sub-groups of ethnic consumers for purposes of tailoring promotion programs.

The study focused on five distinct ethnic groups: (1) Muslims, (2) Jews, (3) Asians, (4) Hispanics, and (5) Greeks with primary emphasis on the Muslim-American community. Six locations of the highest concentrations of the target ethnic groups within the United States were selected for interviews: (1) New York/New Jersey area, (2) Detroit/Dearborn, Michigan, (3) Chicago, Illinois, (4) Southern California (Los Angeles and San Diego), (5) St. Louis, Missouri, and (6) Houston, Texas. The sites selected for interview within each target area consisted primarily of ethnic butcher shops, retail stores and sheep/lamb slaughter facilities as well as

general grocery stores and other food retailers in the target areas. The survey instrument consisted of three main sections of questions. The questions in the first section of the survey asked respondents to provide personal information to allow a categorization of survey responses by demographic characteristics, including age, education level, gender, marital status, number in the household, employment status, household income, race/ethnicity, and religion. The questions in the second section probed for information on the respondents' lamb purchasing behavior while questions in the third section explored their lamb consumption and preparation behavior.

The demographic profile of the Muslim respondents to the survey was highly similar to that reported by an extensive study of the U.S. Muslim community by the Pew Center (2007). Indeed, the demographic characteristics of all survey respondents across all ethnicities/races were quite similar to those reported for the general population in the 2002 U.S. Census (Pew Center, 2007). The demographic profiles are also similar to those of the at-home lamb consumers in the A.C. Nielsen HomeScan™ Consumer Panel Data (Williams and Capps, 2008). Thus, despite being precluded by the limited budget for this project from developing a statistically valid representative sample of potential ethnic respondents from which to draw for interviews, the demographics of the ethnic respondents to this survey nonetheless appeared to be quite consistent with those of similar groups of survey respondents drawn from representative samples by other well regarded market research groups and the U.S. Census.

The study finds that the two most important drivers of the lamb buying and preparation behavior of ethnic consumers are differences in race/ethnicity and religion. However, we also find that other demographic factors, including age, education, gender, marital status, household size, and income, have important effects on ethnic lamb buying and preparation behavior. Also, price is a clearly important factor driving ethnic lamb purchasing behavior. Profiles of those individuals most likely to exhibit a few of the key ethnic lamb buying and preparation behaviors include the following as indicated by the survey results:

- *Prepare Lamb at Home at Least Weekly*: Married, employed, male under age 50 from a large household (3 or more) of Middle Eastern or Asian origin and Muslim or Jewish religion.
- *Influenced in Their Purchases by One of the Three Top Three Purchase Motivators*:
  - » *Flavor* – East European, Middle Eastern, Hispanic, Asian, African American who are Christians, Muslims, or Jews;
  - » *Tradition* – Middle Eastern Muslim.; and
  - » *Price* – Western European, Hispanic, and/or Jewish.
- *Considers Price to be the Most Important Lamb Feature that Needs to Change*: Employed female age 50 or over from a small household (3 or fewer members) and a household income of \$60,000/year or more who is African American, Hispanic, or Western European and is Jewish or Christian.
- *Consider Various Meats or Seafood to be Substitutes for Lamb*:
  - » *Beef* - Married male under age 50 with a household income of more than \$60,000 of a Western European or Hispanic race/ethnicity and either a Jew or Christian;
  - » *Chicken* - Married female with a large household (more than 3 members) who is either a Muslim or a Jew;
  - » *Seafood* - Anyone of Asian race/ethnicity and Asian religion or African American or Hispanic race/ethnicity;

- » *Goat* - Single, employed (part-time or at home) female with a smaller household (3 or fewer members) of Asian race/ethnicity and religion or Western European or African American race/ethnicity; and
- » *Pork* – Older (over 50), high school or less education, unemployed male from a smaller household (3 or fewer) of Asian race/ethnicity and religion or Hispanic Christian.
- *Not Aware of Origin of their Lamb Purchases*: Single Hispanic, African American, or Middle Eastern female, less than 50 years old and less educated (high school or less) from a small household (3 or fewer members) who is unemployed with lower household income (less than \$60,000/year).
- *Purchases Only American Lamb*: Married Middle Eastern, African American, or Muslim male less than 50 years old with less education (high school or less) but employed full-time with household income of at least \$60,000/year.
- *Purchases Only Imported Lamb*: Single East European, Jewish or Christian male 50 years of age or older who is better educated (at least some college) and with a household income of less than \$60,000/year.

Combining the demographic information with the behavioral information from this study and information gleaned from conversations with several groups with long experience and knowledge of ethnic lamb markets allowed a segmentation of the ethnic market into various sub-groups for purposes of tailoring promotion programs targeted at ethnic lamb consumers. Promotion programs that may successfully enhance lamb consumption among traditional (non-ethnic) lamb consumers are not likely to be as successful when applied to the ethnic lamb consuming market segment given their diverse backgrounds and culture. Also, as this study demonstrates, ethnic consumers themselves are highly diverse in their lamb preferences and behavior resulting in many different sub-segments of that portion of the market as well.

For example, the study results suggest that the Muslim lamb market can be segmented into four key sub-groups for promotion purposes: (1) quality-driven, (2) price-driven, (3) quality first but price is important, and (4) price first but quality is important. The *quality-driven segment* of Muslim lamb consumers includes those of Middle Eastern races/ethnicities, including Lebanese, Syrians, Yemenis, Palestinians, Saudis, and others. Motivated primarily by the freshness, cleanness, smell and other quality attributes of the lamb they buy, they are fiercely loyal to trusted lamb butchers and tend to buy lamb for regular daily/weekly consumption, religious observances, and special occasions regardless of price. They tend to be unwilling to substitute other meats for lamb and buy only lamb that is Halal slaughtered. They demand baby lamb in preference to yearling lamb or mutton and prefer American to imported lamb. This segment would not buy lamb sold from large chain grocery or discount stores even if it is marked “Halal” not only because the required trust in the store and its products is difficult to attain but also because pork is usually sold in the same meat cases.

The *price-driven segment* of Muslim lamb consumers is composed primarily of North Africans and Muslims from other African countries, including Somalis, Ethiopians, Tunisians, Nigerians, Egyptians, and others. Motivated primarily by price, they shop wherever they can find low-priced lamb and are more willing to substitute beef, chicken and other meats for lamb when its price is high. They tend to buy imported lamb and cheaper cuts of American lamb because they are largely unaware of and unconcerned about any quality differences. They are less likely to be

concerned with strict religious observances and more likely to assume that the lamb they buy is Halal. They are also willing to buy non-Halal lamb on occasion if it is cheaper or more available.

The *quality-first segment* consists primarily of East European Muslims, including Albanians, Uzbekistanis, and others from predominantly Muslim countries of the former Soviet Republics. These groups prefer good quality lamb and exhibit buying behaviors similar to those in the *quality-driven* segment but will search for low prices and tend to be less loyal to local butcher shops. They also prefer young, lightweight, lean lambs but will settle for something else if the lamb they want is not available or too highly priced. They are more likely to substitute good quality, fresh Halal beef or chicken for lamb for weekly meals if the price is right but are less likely to do so for religious observances and special occasions. They may be susceptible to price promotions if they can be convinced that the lamb is fresh, clean, and good quality and if the pork is segmented from the other meats.

The *price-first segment* of Muslim consumers consists primarily of Asian Muslims, including Indians, Pakistanis, Bangladeshis, Malaysians, and others. They are primarily price-driven but quality (freshness and cleanness) is still important to them. They search out low-price sources of lamb and quickly switch from one supplier to another if the price is too high. Largely unaware of the origin of the lamb they buy, they will buy either American or imported lamb depending on the price. Because quality is still important to them, they tend to stick with a low-price supplier if they also perceive the quality to be acceptable. They expect the supplier to be willing to negotiate on price and are more flexible on the requirement to consume only Halal meat. This segment is also less traditional in their religious observances and, thus, tends to be more flexible on the age and size of the carcass. They buy mainly yearling lamb because of the price but prefer lean and not fatty meat. This group may be a good target for large chain store sales of lamb if the stores can gain their trust and confidence by providing a consistent supply of low-priced and good quality Halal lamb.

Other groups of ethnic lamb consumers can also be segmented in this way. According to the study, Jewish and Western European lamb consumers (Greeks, Italians, others) tend to be in the *quality-first* segment of the market. They demand good quality but will negotiate on price. They are less concerned with procuring lamb for religious observances than Muslims even though they often serve lamb on appropriate religious holidays and special occasions. They also tend to consume lamb at home less frequently and eat lamb away from home more frequently than Muslim lamb consumers.

Hispanic lamb consumers tend to be in the *price-driven* segment. The majority of traditional lamb-consuming Hispanics come from the regions in central Mexico near Mexico City where sheep production has survived since colonial times, including the regions of Hidalgo, Tlaxcala, Xochimilco, and Puebla. Outside these areas of Mexico, lamb is largely unknown and no more a part of the diets of the inhabitants than is the case for the majority of non-ethnic Americans. Hispanic demand for lamb is focused on lower-priced and older cuts of lamb. Imported lamb is acceptable as long as it is price competitive. They also tend to be unconcerned with the origin of the lamb or its freshness, or quality and are more concerned with its cost and availability.

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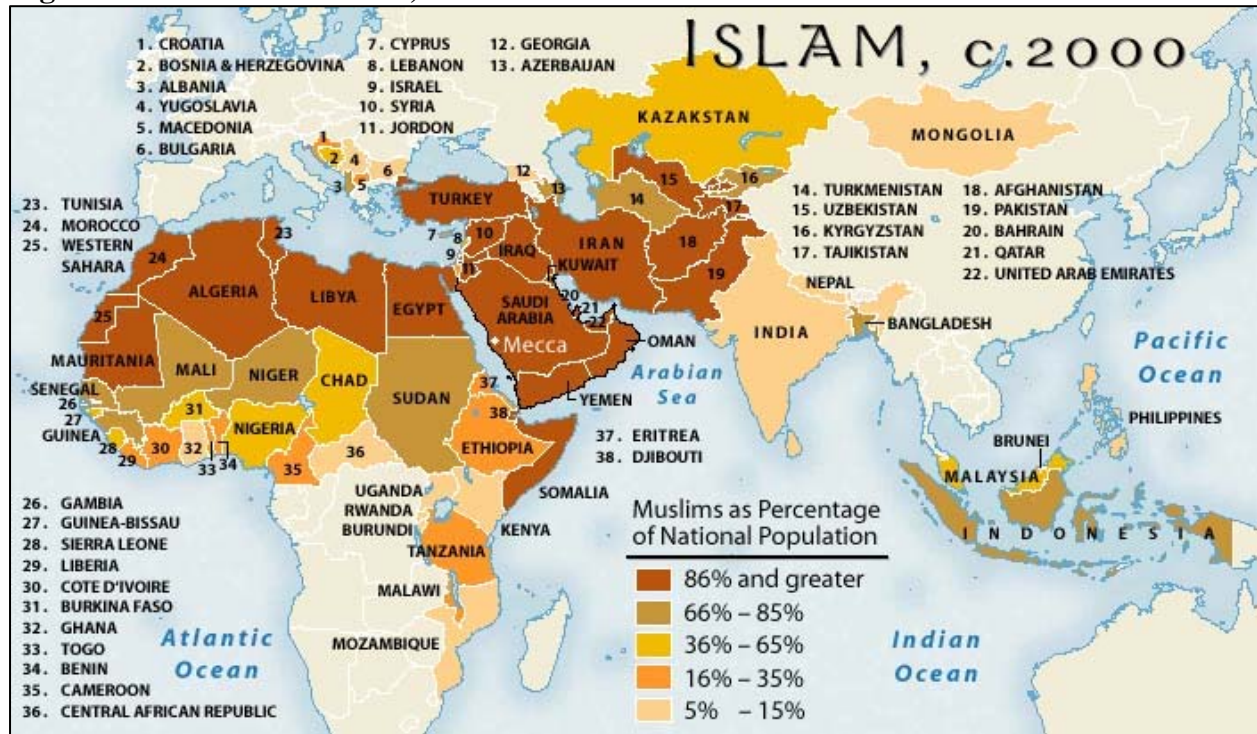
A recent study by the National Academies on the current status of the U.S. sheep and lamb industry concluded that “there exists a pressing need to extend beyond the traditional price and per capita consumption series to provide improved and more detailed socio-economic profiles of consumers in different market areas so that product offerings can be tailored to meet the desires of consumers” (NAS, 2008). The study stresses a particular need for more detailed information on ethnic lamb consumers because they will undoubtedly account for a large and increasing share of future lamb demand.

Ethnic lamb buyers are a difficult group to define and even harder to measure primarily because there is no clear definition of what it means to be “ethnic.” In general, ethnic groups are usually classed according to common racial, national, tribal, religious, linguistic, or cultural origin or background. Often, ethnic groups are defined based on a shared cultural heritage and are sometimes connected with some national or other geographic area. Ethnic groups are not necessarily minority groups because the definition of “ethnic” has little to do with the number of people in the group relative to the total population. They are not necessarily racial groups or groups with a specific national identity either since an ethnic group can cross racial and national boundaries. For example, the Islamic “ethnic” group consists of people whose national origins may be one of a large number of countries in Africa, the Middle East, Eastern Europe, South Asia, Pacific Asia, and other areas of the world (see Figure 1). In some countries, the Islamic people are in the majority as in much of northern Africa and the Middle East. But they are also a numerical minority in other areas of the world such as Europe, India, and the United States.

The exact number of Muslims living in the United States has proved difficult to measure because the U.S. Census does not track religious affiliation. Unofficial estimates range widely from 2 million to 7 million (U.S. Department of State, 2009). The 2000 U.S. Census estimated 1.2 million people in the United States with an Arab ancestry out of a total population of 281.4 million, about 0.4% of the total (de la Cruz and Brittingham, 2003). While many Arabs are Muslims, however, not all Muslims are Arabs so that the Census estimate of Arab Americans greatly understates the number of people in this country who espouse the Islamic faith and traditions.

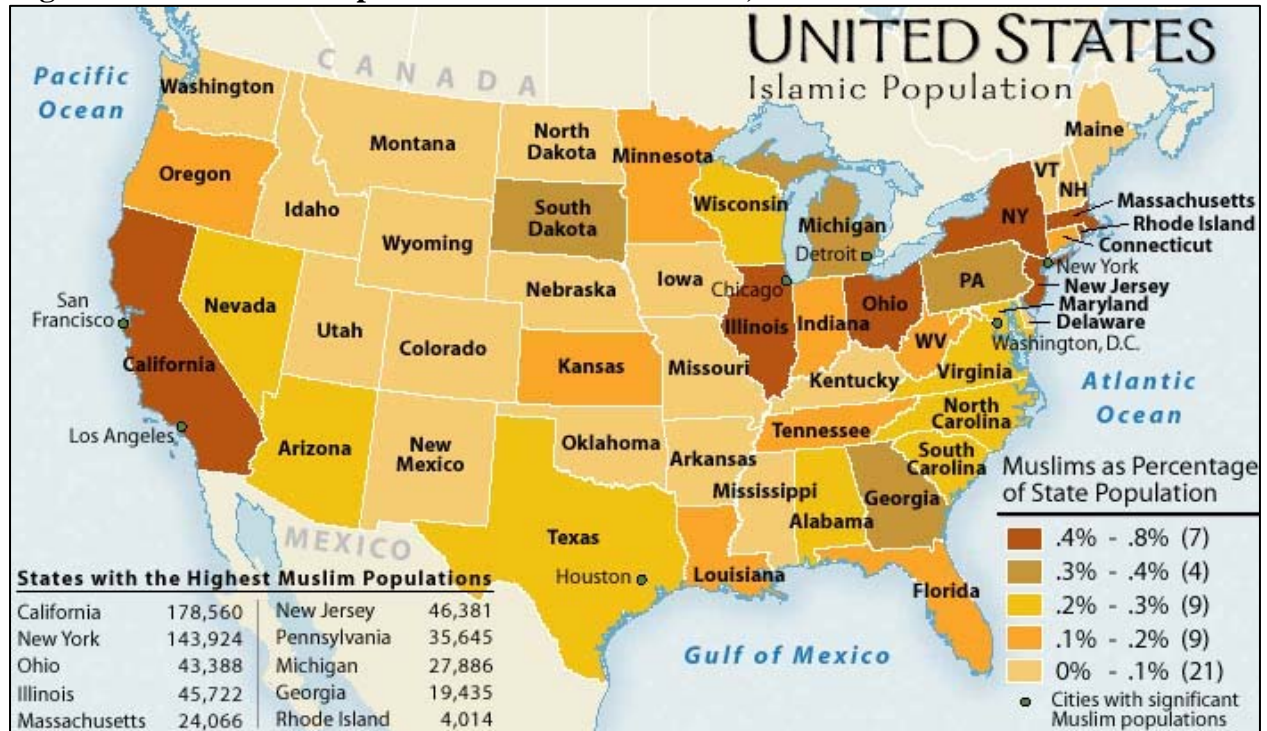
Even though the actual number of Muslims living in this country is in doubt, the Muslim-American population is clearly growing rapidly by as much as 3% to 6% a year as a result of immigration, a high birth rate, and conversions (U.S. Department of State, 2009). Even if the annual growth rate is a conservative 2%, that means the American-Muslim population will increase by over 20% in the next decade. According to the 2000 Census, the Arab population alone increased by nearly 40% during the 1990s (de la Cruz and Brittingham, 2003). Because they tend to live in close proximity, the concentrations of Islamic peoples in certain areas of the United States have grown dramatically. The highest concentrations of Muslims in this country are in the New York/New Jersey area, California, Ohio, Illinois, Michigan, and other areas of the Northeast (Figure 2). The 2000 Census results for the geographical dispersion of the Arab population is similar, showing the highest concentrations in the Northeast, Detroit, Southern California, and Florida (Figure 3). Muslim Americans are a racially diverse group in this country. The majority,

Figure 1: The Islamic World, 2000



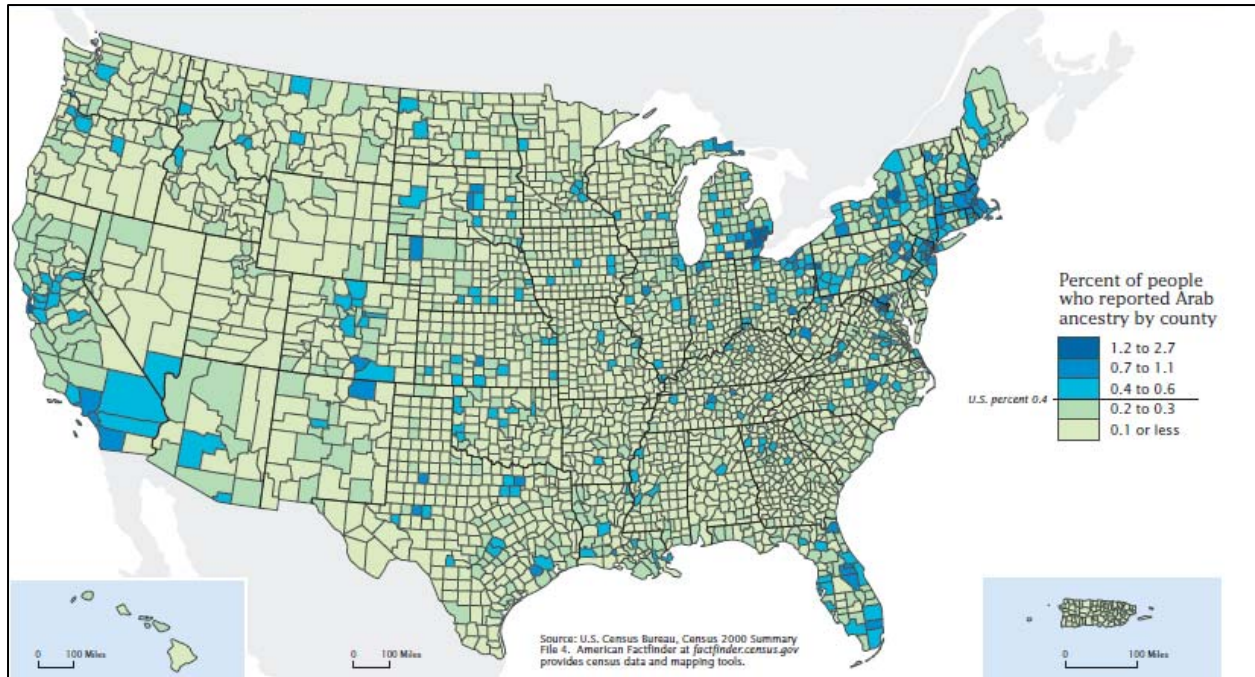
Source: The Islam Project (<http://www.islamproject.org/education/Maps-pickem.htm>)

Figure 2: The Islamic Population of the United States, 2000



Source: The Islam Project (<http://www.islamproject.org/education/Maps-pickem.htm>)

**Figure 3: U.S. Population of Arab Ancestry by County, 2000**



Source: (de la Cruz and Brittingham, 2003), 2003.

about 60% of Muslim Americans, are of South Asian and Arab origin, 25% are recent converts of whites, Hispanics, and indigenous African Americans while the rest belong to a wide variety of other ethnic groups, including many from the former soviet socialist countries of Eastern Europe (Uzbekistan, Tajikistan, Kyrgyzstan, and others), Turkey, Iran, Bosnia, Malaysia, Indonesia, North and West Africa, Somalia, Ethiopia, and Tanzania (U.S. Department of State, 2009). About 65% of Muslim-Americans are first-generation immigrants, of which 61% arrived since 1990. Nearly 80% of Muslims living in the United States are citizens, with 65% of the foreign-born Muslims being naturalized citizens (Pew Research Center, 2007). Also, even though most Americans identify Islam primarily with Arabs, two-thirds of Arab Americans are Christian by most estimates (Sampan, 2001). However, since World War II when about 90% of Arab Americans were Christian, most Arab immigrants have been Muslims and Muslims are the fastest-growing segment of the Arab-American population.

Muslim Americans generally mirror the U.S. public in education and income levels with immigrant Muslims slightly more affluent and better educated than native-born Muslims (Pew Research Center, 2007). Nearly 25% of all Muslims and nearly 30% of immigrant Muslims have college degrees, compared to 25% for the U.S. general population. Over 40% of all Muslim Americans and 45% of immigrant Muslims report annual household income levels of \$50,000 or more which compares to the national average of 44%. Immigrant Muslims are well represented among higher-income earners as well with 19% claiming annual household incomes of \$100,000 or more (compared to 16% for the Muslim population as a whole and the national average at 17%). Their income profile is likely due to the strong concentration of Muslims in professional, managerial, and technical fields, especially in information technology, education, medicine, law, and the corporate world (U.S. Department of State, 2009).

Wherever they go in the world, including the United States, immigrant Muslims take their “ethnic” traditions with them. Despite racial and cultural disparities, Muslims share a common religious bond which, as a result, endows them with certain common characteristics, behaviors, and beliefs, including favoring lamb as the red meat of choice. For that reason, the demographics and rapid growth of the Muslim-American community are of particular interest to the U.S. sheep and lamb industry. The growth in the Muslim-American community is encouraging news for an industry besieged by many forces working against it over many decades (NAS, 2008). However, the Muslim-American community is not the only ethnic group in the United States that has a strong lamb consumption tradition. Others include primarily the Greek and Jewish communities. Other ethnic groups have also demonstrated some growth in lamb consumption in recent years including Hispanics and African Americans (Williams and Capps, 2005), although that growth, particularly of African Americans, may stem from their increasing rate of conversion to the Islamic faith. African-Americans now account for somewhere between 20% and 40% of the Muslim population in the United States (Department of State, 2009). The conversion of Hispanics to Islam has been less notable resulting in only about 4% of Hispanics that consider themselves Muslims (Pew Research Center, 2007). The Greek community in this country constitutes only about 0.4% of the population while the Jewish community represents roughly 2.2%. While both of these ethnic groups have strong traditions of lamb consumption, the growth rates of both groups have not been much different than that of the general U.S. population in recent years.

A recent study by Shiflett, Williams, and Rogers (2010) estimates that despite accounting for only 35% of the U.S. population in 2008, minority populations accounted for 58% of the total U.S. lamb consumption that year. The study further concludes that if current ethnic population growth rates continue, lamb consumption could grow exponentially over the next 40 years. They estimate that lamb consumption by ethnic groups in 2050 could well surpass current lamb availability by 60%. However, despite the importance of ethnic groups to both current and future consumption of lamb, little is known about the socio-demographic characteristics of ethnic consumers who purchase lamb, how, where, and why they buy lamb, the specific characteristics of lamb that they value, the factors that drive their purchasing behavior, and their comparative perceptions of the acceptability of domestically produced and imported lamb for their needs.

To position the American Lamb Board for developing marketing and promotion plans targeted to the growing number of ethnic lamb consumers in this country, this study develops new and strategically important information on this key lamb consuming segment of the population. Through face-to-face interviews by a team of highly qualified sheep and lamb marketing experts with ethnic consumers in the major geographic areas of the country where they live, this study provides new insights on ethnic lamb consumer buying and preparation behavior and preferences. After reviewing the research methodology implemented in this study, a demographic profile of the survey respondents is provided. A question-by-question analysis of the survey responses is then followed by a discussion of the main conclusions and implications of the survey results for targeting sales and promotions to ethnic lamb consumers, including a discussion of ethnic lamb market segmentation.

## RESEARCH METHODOLOGY

Given the difficulty of identifying the proper ethnic subjects through a phone or mail-based interview, the research team determined that meaningful results could only be obtained by conducting face-to-face interviews with those individuals that the team determined met the “ethnic” requirements of the survey. One criticism of the Shiflett, Williams, and Rodgers (2010) study was that interviews of supposedly “ethnic” lamb consumers were conducted through an Internet survey. The assumption that the primary target group of “ethnic” consumers has access to the Internet in representative numbers is doubtful at best. Also, survey respondents in their study were selected based on the primary and secondary languages spoken at home, including Arabic, Hebrew, Eastern European languages, Asian Indian languages, and others. Given that the majority of Arab Americans are reported to be Christian (Samhan, 2001) and that many individuals who speak these languages are not Muslims, it is highly likely that the responses of many people who do not fit the target “ethnic” profile were included in their survey results regardless of whether those people also reported eating lamb. Many non-Muslims in this country also eat lamb but they are not the target group of interest for analyzing “ethnic” consumers’ lamb consumption behavior.

Given project budget constraints and the relative importance of the growing Muslim-American community for future lamb consumption, the team determined to focus on 5 distinct ethnic groups: (1) Muslims, (2) Jews, (3) Asians, (4) Hispanics, and (5) Greeks with primary emphasis on the Muslim-American community. After researching the primary locations of highest concentrations of the target ethnic groups within the United States (and again, given budget constraints), the research team selected six target locations for interviews: (1) the New York/New Jersey area, (2) Detroit/Dearborn, Michigan, (3) Chicago, Illinois, (4) Southern California (Los Angeles and San Diego), (5) St. Louis, Missouri, and (6) Houston, Texas. Extensive lists of potential interview sites in each city were selected using a variety of resources ranging from on-line directories to personal contacts in each area. The potential interview sites consisted of primarily ethnic butcher shops, retail stores and sheep/lamb slaughter facilities as well as general grocery stores and other food retailers in the target areas.

To cull the list in each area to a manageable size, the team made phone calls to various potential locations to determine their volume of lamb sales and clientele and to elicit the cooperation of the owner/manager if possible. The team was greatly assisted in this process by Scott Pearson, ALB Compliance Coordinator, who reviewed many of the potential location lists and provided suggestions for primary contacts in several of the target cities. He called potential primary contacts to inform them of this project and to tell them to expect a call from the research team that would be coming to their areas. That assistance opened the door to several key locations for interviews, primarily in New York/New Jersey, Detroit, and Los Angeles.

In each of the target locations, the interview teams communicated initially with the previously identified primary contacts. In some cases, the primary contacts reviewed the contact lists and made suggestions of those to eliminate from the lists and others to be added. A few of the primary contacts were so excited about the study that they called some of their acquaintances on the lists to introduce the interview team and to elicit their cooperation. Upon arriving at each potential interview location, the interview team first made contact with the owner or manager to introduce themselves, explain the purpose of the project and the interview process, and elicit their

cooperation. The interview team members wore specially designed name tags that prominently displayed the researcher's names and informed that each of the interviewers was a professor from Texas A&M University with a Ph.D. The teams explained to the owner or manager at each potential interview store site that the project was part of a Texas A&M University research project to better understand the Muslim-American and other ethnic communities and their lamb buying behavior. The teams explained that lamb producers were anxious to provide the lamb customers at that location with the best product possible and to work to resolve any problems with their products. The teams further explained to the owners and managers that they would be buying about \$50 to \$100 of their lamb to give to their customers as a gift (participation incentive) in exchange for their assistance in answering the questions on the survey.

In most cases, except some places in California, the introductions, explanations, and offers to buy lamb both allayed any fears of possible dubious intent on the part of the interview team and successfully gained the cooperation of the owners/managers, often inspiring their active participation in the interview process. For example, the owners/managers often provided space for the interviews to occur as well as chairs and workspaces for the interview team. In many cases, they enthusiastically informed their customers of the interviews being performed and sent them to the interviewers to get "free lamb" for just answering a few questions. In other cases, the owner/managers helped in the interview process by translating the interview questions to Spanish or Arabic or some other language and then translating the responses back in English.

In each location, the interview team intercepted potential survey respondents often near the meat case but not always. Potential survey respondents were selected at random by the interview team at each location. The interview team first introduced themselves and provided the potential respondents with an information sheet approved by the Human Subjects' Protection Program and the Institutional Review Board at Texas A&M University (Appendix 1). After reviewing the information on the sheet with each potential respondent, the interview team then pre-qualified them by explaining that this survey was intended to learn more about the lamb buying and preparation behavior of various ethnic groups, such as Arabs, Muslims, Jewish people, Asians, Hispanics, and Greeks and their descendants. They were then asked if they thought they qualified for the survey. If so, the interview team offered each respondent a coupon worth \$10 of lamb if they would be willing to answer a few questions about lamb (Figure 4). The assistance of the owner/managers, the name tags, the explanations of the interview teams, and the coupons successfully gained the trust and confidence of the interviewees in most locations.

Given that 87% of Muslim-Americans speak English according to the Pew Center study (2007), we determined to conduct the interviews primarily in English. Spanish translations of the survey were also made available to the interview teams in cases where the English of Hispanic interviewees was labored and assistance was needed with vocabulary (for example, Spanish terms for the various cuts of lamb). One member of the interview teams speaks fluent Spanish and conducted all interviews with Hispanic respondents in Spanish. Interviews with all other ethnic groups were conducted in English. Few language problems were actually encountered by the interview teams both because the vast majority of the interviewees spoke English and because the store owners or family member, store employee, or someone else at the interview location was often available who could translate if necessary. For safety considerations in the many local

**Figure 4: Lamb Coupon Provided to Lamb Survey Recipients**



neighborhoods and retail areas where the interviews were conducted, the interview teams were instructed to limit their interview hours to 10:00 am to 5:00 pm even if the store was open later unless the circumstances warranted.

The survey respondent selection and interview process followed at each location yielded an excellent set of interview respondents that were indisputably members of the specific target ethnic groups that could provide the required information on ethnic lamb purchasing and preparation behavior. Admittedly, however, the set of survey respondents generated in this way was not necessarily fully representative of all five target ethnic groups. Given that no reliable population count for the target communities is available much less reliable lists of ethnic lamb consumers, the cost of obtaining a representative sample of each group to interview would have been prohibitively expensive. The Pew Center (2007) reports having to interview nearly 60,000 respondents to find a representative sample of Muslims for their study of Muslim Americans. Such an undertaking was well beyond the limits of the budget for this project. Nevertheless, the information garnered from these surveys proved to be highly insightful and will likely be extremely useful for enhancing and re-focusing current promotion efforts targeted at lamb-consuming ethnic groups.

The surveys were administered over the summer months of 2010. The survey instrument consisted of three main sections of questions: (1) demographic information questions; (2) lamb purchasing behavior questions; and (3) lamb consumption and preparation behavior questions (Appendix 2). The questions in the demographic information section were all objective, closed-ended multiple choice questions. That is, for each question, the respondents were presented with a list of possible answers from which to choose with an “other” option to allow the respondent to provide his/her own response. The questions in the demographic section asked respondents to provide important information about themselves to help with stratifying, or categorizing, the survey answers by their demographic characteristics. Demographic characteristics requested of the survey respondents



included age, education level, gender, marital status, number in the household, employment status, household income, race/ethnicity, and religion.

The questions in the second section of the survey probed for information on the respondent's lamb purchasing/preparation behavior. Questions in this section related to how often lamb is consumed in the home and away from the home, religious holidays for which lamb is prepared, and the reasons for purchasing lamb at that particular location. The questions in the next section of the survey explored more specifically the responding consumer's lamb buying, consumption, and preparation behavior. These questions focused on the factors influencing the respondent's purchases of lamb, food products considered to be substitutes for lamb, the extent to which they purchase American or imported lamb and their perceptions of the value and quality of each, the cuts of lamb normally purchased, how lamb is usually prepared for consumption in the home, and problems the respondents have encountered in purchasing or preparing lamb.

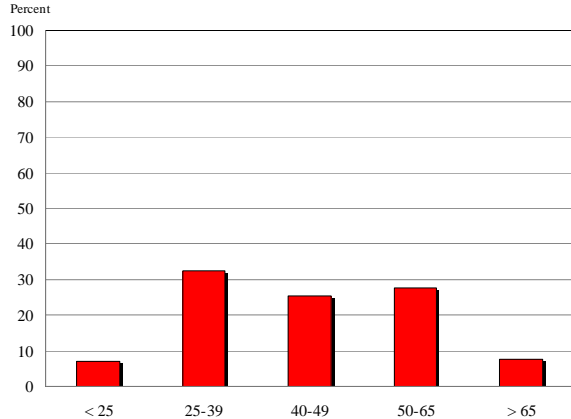
### **RESPONDENT DEMOGRAPHIC PROFILE**

A total of 175 face-to-face intercept interviews were conducted by five teams of two interviewers in each of the six target regions (New York City/New Jersey; Detroit/Dearborn, Michigan; Chicago, Illinois; Southern California, primarily the Los Angeles and San Diego areas; St. Louis, Missouri, and Houston, Texas). The following provides profiles of those people who were interviewed based on the demographic information in the first section of the survey.

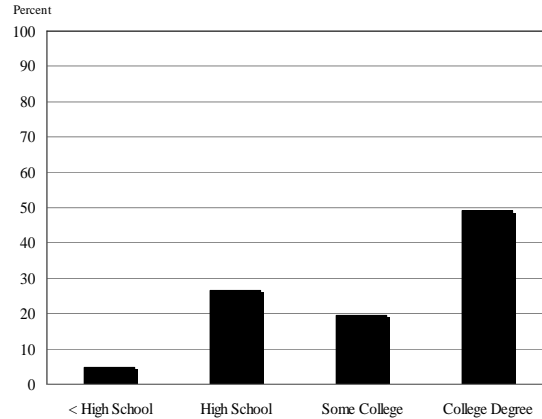
*Age Profile:* About 85% of the survey respondents were between the ages of 25 and 65 with nearly equal shares in the 25-39 age group (32%), the 40-49 age group (25%), and the 50-65 age group (28%) (Figure 5). Only 7% were adults less than 25 years of age and another 8% over the age of 65. The Pew Center study (2007) found that 44% of all adult Muslims and 60% of the general population in America are over the age of 40. The ethnic respondents to the ethnic lamb survey tended to be older than what the Pew Center study reported for the U.S. Muslim population with 61% over the age of 40 but about the same age as the general U.S. population. Based on the A.C. Nielsen HomeScan™ Consumer Panel Data, Williams and Capps (2008) found that between 1998 and 2004, 87% of all lamb consumers were over the age of 40.

*Education Profile:* The survey respondents were generally highly educated. Nearly 70% reported taking at least some college courses with 50% reporting they had earned a college degree (Figure 6). A similar education profile for all lamb consumers comes from the A.C. Nielsen HomeScan™ Consumer Panel Data for 1998 to 2004 where 77% reported taking at least some college courses (Williams and Capps, 2008). The Pew study also found that Muslims tend to be highly educated with 47% reporting at least some post-high-school college work. In comparison, 52% of the general U.S. population has completed at least some college work (as reported by the Pew Center, 2007).

**Figure 5: Age of Respondents**



**Figure 6: Education of Respondents**



*Gender Profile:* The number of men and women surveyed was nearly equal, 49% men and 51% women (Figure 7). The Pew Center (2007) found that 54% of Muslim Americans are male and 46% female. The gender breakdown of the survey respondents matched more closely that of the 48% men and 52% women in the general U.S. population (as reported by the Pew Center, 2007).

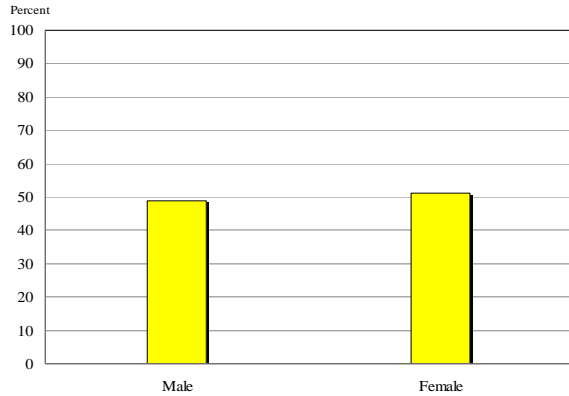
*Marital Status Profile:* Married respondents to the ethnic lamb consumer survey outnumbered the single respondents by more than 2 to 1 (70% versus 30%, respectively) (Figure 8). The Pew Center (2007) found a similar marital composition of the Muslim-American community (60% married and 40% single). In the general population, only 57% are reported to be married while 43% claim to be single (as reported by the Pew Center, 2007).

*Number in Household Profile:* Over half (53%) of the ethnic lamb survey respondents reported living in households with 4 or more people. In contrast, only 8% reported living in a single-member household (Figure 9). Similarly, the Pew Center (2007) study found that only 6% of Muslims live in single member households. The A.C. Nielsen HomeScan™ Consumer Panel Data indicate that 22% of all lamb consumers lived in single member households over the period of 1998 through 2004 (Williams and Capps, 2008).

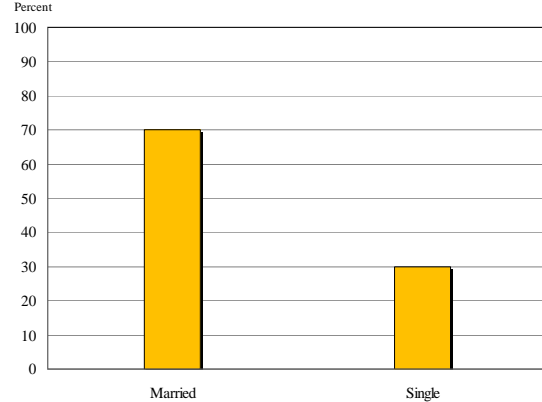
*Employment Profile:* About 45% of the ethnic lamb survey respondents reported being employed full time while 12% reported being employed part time with the rest reporting they either worked in the home or were not employed, including retirees, students, and others (Figure 10). Those percentages were quite similar to the results from the Pew Center (2007) indicating that 41% of all Muslims are employed full time, 16% employed part time, and the remainder unemployed. In the general U.S. population, 49% are employed full time, 11% employed part time, and the rest unemployed (2002 U.S. Census results reported by the Pew Center, 2007). The employment profile of the respondents to the ethnic lamb survey was also similar to that of all lamb consumers for the period of 1998 to 2004 as indicated by the A.C. Nielsen HomeScan™ Consumer Panel Data – 42% employed full time, 17% employed, and the rest unemployed.

*Household Income Profile:* About the same percentage of the ethnic lamb survey respondents reported household incomes of over \$60,000 as reported for lamb consumers in the A.C. Nielsen

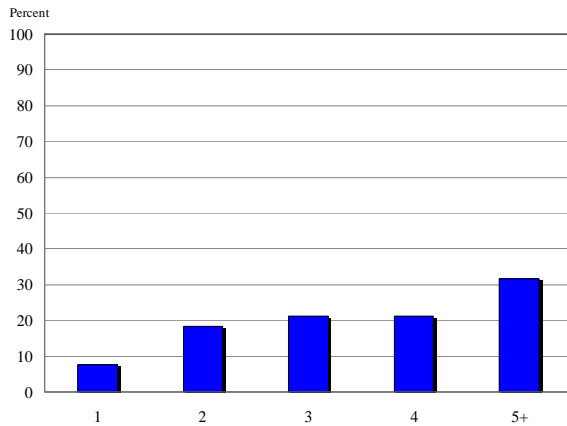
**Figure 7: Gender of Respondents**



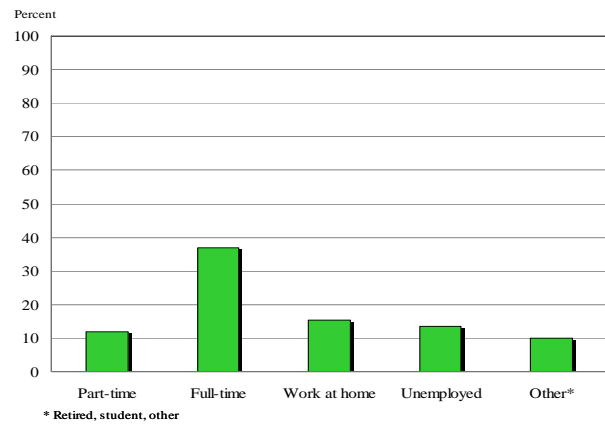
**Figure 8: Marital Status of Respondents**



**Figure 9: No. in Household of Respondents**



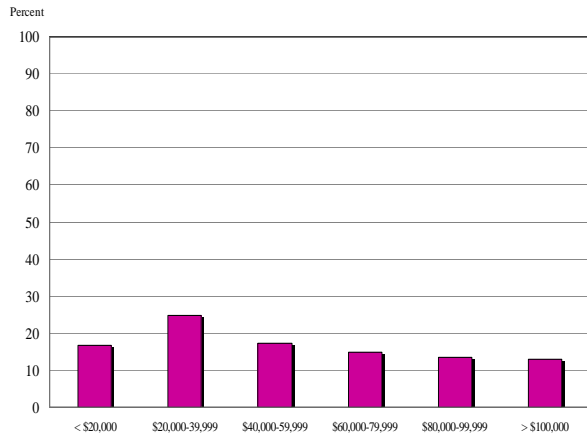
**Figure 10: Employment Status of Respondents**



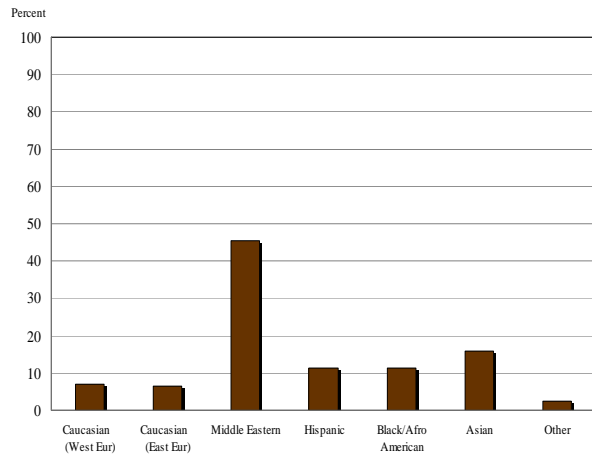
HomeScan™ Consumer Panel Data for 1998 to 2004 (42% and 41%, respectively) (Figure 11). The Pew Center reported 41% of Muslim American households earn \$50,000 or more compared to 44% for the general U.S. population.

*Race/Ethnicity Profile:* About 46% of the ethnic lamb survey respondents reported their race/ethnicity as Middle Eastern/North African including individuals reporting their country of origin or descendency as Algeria, Afghanistan, Egypt, Iran, Iraq, Israel, Jordan, Lebanon, Morocco, Palestine, Syria, Tunisia, Turkey, and Yemen (Figure 12). Another 16% indicated they were Asian including individuals reporting their country of origin or descendency as Thailand, Pakistan, Bangladesh, India, China, Malaysia, and Indonesia. Another 11% reported themselves to be Hispanic from Mexico, Venezuela, Puerto Rico, Guyana, and Central America. Likewise, 11% reported they were African American, most of whom either did not report or indicated no knowledge of their specific African origins although a few indicated their country of origin or descendency to be Guinea, Senegal, Gabon, and Ethiopia. About 14% reported themselves to be Caucasians from primarily Eastern Europe, including those who reported their country of origin or descendency as Greece, Siberia, Hungary, Poland, and the Ukraine with a few from unknown

**Figure 11: Household Income of Respondents**



**Figure 12: Race/Ethnicity of Respondents**



Western European origins. The remaining 10% of the survey respondents were of mixed or unknown race/ethnicity. The Pew Center Study (2007) reported that 38% of Muslim Americans consider themselves “white” with 26% considering themselves as “black,” 20% as “Asian,” and 16% as “other/mixed.” According to the A.C. Nielsen HomeScan™ Consumer Panel Data for 1998 to 2004, 76% of all lamb eaters consider themselves to be “white,” 17% “black,” 3% “Oriental” or “Asian,” and 4% other.

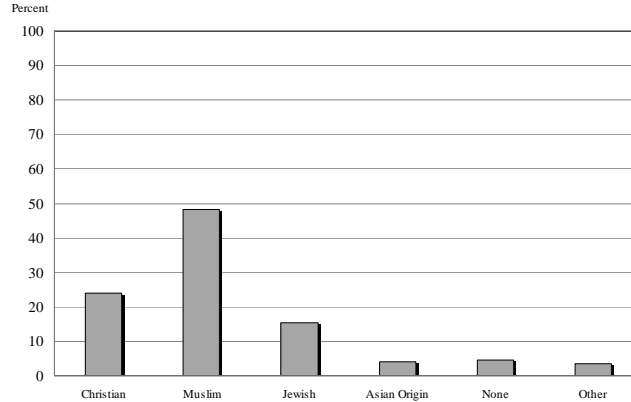
*Religion Profile:* About half (48%) of the ethnic lamb consumer survey respondents reported that they were Muslim while nearly a quarter (24%) reported that they were Christian, 15% Jewish, 4% a variety of Asian religions, and the remainder (8%) other religions (including those professing no religion) (Figure 13).

In general, the profile of the respondents to the ethnic lamb consumer survey was highly similar to those reported by the Pew Center (2007) for Muslims and/or by the U.S. Census for the general population. The profiles are also similar to those provided by the A.C. Nielsen HomeScan™ Consumer Panel Data across all at home lamb consumers. The implication is that despite being precluded by the budget for this project from developing a statistically valid representative sample of potential respondents from which to draw for interviews, the demographics of the respondents to this survey nonetheless appeared to be quite consistent with those of similar groups of survey respondents drawn from representative samples by other well regarded market research groups.

## SURVEY RESULTS

After determining the demographic characteristics of qualified survey respondents, the survey asked them about the frequency of their lamb consumption. These questions were followed by questions on their behavior in purchasing, consuming, and preparing lamb. The discussion of the results is supported by the use of a few selected tables and graphs. The full set of tables and graphs providing the detailed responses of those interviewed broken down by the demographic characteristics of the respondents is provided in a supplement to this report.

**Figure 13: Religion of Respondents**



### **Frequency of Ethnic Lamb Purchases/Preparation**

Respondents were first asked to indicate how frequently they prepare lamb at home and eat lamb away from home, either at a restaurant or the home of a friend or family member. They were also asked to indicate the holidays or other special occasions for which they typically prepare lamb. Finally, they were asked the reasons for shopping for lamb at the interview location.

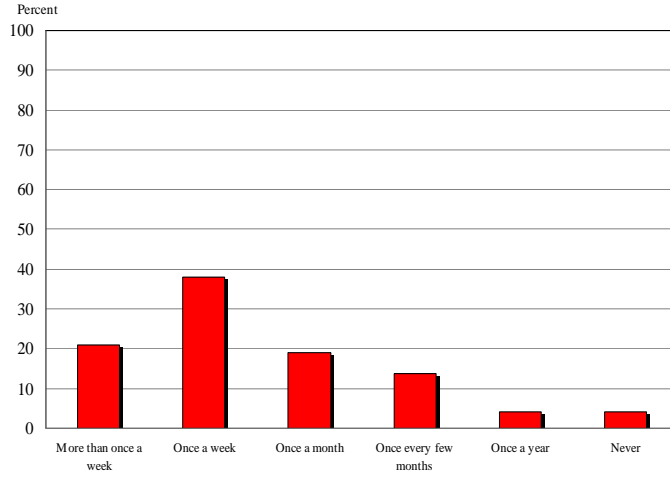
### ***Frequency of Ethnic Home Preparation of Lamb***

Nearly 60% of the respondents indicated that they prepare lamb at home once a week or more often (Figure 14). The largest percentage (38%) indicated they prepare lamb at home once a week. Another 20% indicated they prepare lamb at home more than once a week.

Neither the education nor income level of the respondents made much difference in the frequency of home preparation of lamb. About 60% of the respondents with a high school education or less indicated they prepare lamb at home compared to 58% of those with more education. Also, about 58% of respondents indicating annual household incomes of less than \$60,000 prepare lamb at home at least once a week which is the same percentage of those reporting household incomes of \$60,000 or more.

Not surprisingly, the race/ethnicity and religion of the respondents created the greatest differences in the frequency of home preparation of lamb (Tables 1 and 2). More than 80% of the respondents who indicated their race/ethnicity to be “Middle Eastern” or their religion to be “Muslim” also indicated that they prepare lamb at home at least once a week. Also, 63% of the “Asians,” 46% of the “East Europeans,” and 42% of the “African Americans” surveyed prepare lamb at home at least once a week. Less than 20% of the “West Europeans” and “Hispanics” surveyed indicated preparing lamb at home at least once a week. About 50% of those of the Jewish faith reported preparing lamb at home at least once a week compared to 43% of those of Asian-origin religions, and 38% of the Christians as well as those professing no religion.

**Figure 14: How Often Do You Prepare Lamb at Home?**



**Table 1: Frequency of Lamb Preparation at Home by Race/Ethnicity (Row Percent)**

Race/Ethnicity	More than once a week	Once a week	Once a month	Once every few months	Once a year	Never	Total	Mean	Std Dev
	%								
West European	9.1	9.1	45.5	27.3	9.1	0.0	100.0	16.7	16.7
East European	36.4	9.1	27.3	18.2	9.1	0.0	100.0	16.7	13.4
Middle Eastern	22.4	57.9	9.2	5.3	3.9	1.3	100.0	16.7	21.5
Hispanic	10.5	5.3	26.3	31.6	10.5	15.8	100.0	16.7	10.2
Afro-American	10.5	31.6	26.3	15.8	0.0	15.8	100.0	16.7	11.2
Asian	29.6	33.3	22.2	14.8	0.0	0.0	100.0	16.7	14.4
Other	25.0	50.0	25.0	0.0	0.0	0.0	100.0	16.7	20.4
Mean	20.5	28.0	26.0	16.1	4.7	4.7			
Std Dev	11.5	20.4	11.6	9.4	4.8	8.0			

**Table 2: Frequency of Lamb Preparation at Home by Religion (Row Percent)**

Religion	More than once a week	Once a week	Once a month	Once every few months	Once a year	Never	Total	Mean	Std Dev
	----- % -----								
Christian	20.0	17.5	25.0	22.5	5.0	10.0	100.0	16.7	7.7
Muslim	21.0	59.3	14.8	4.9	0.0	0.0	100.0	16.7	22.5
Jewish	19.2	30.8	19.2	11.5	19.2	0.0	100.0	16.7	10.2
Asian Origin	28.6	14.3	42.9	14.3	0.0	0.0	100.0	16.7	16.7
None	37.5	0.0	12.5	25.0	0.0	25.0	100.0	16.7	15.1
Other	0.0	0.0	16.7	66.7	0.0	16.7	100.0	16.7	25.8
Mean	21.0	20.3	21.8	24.2	4.0	8.6			
Std Dev	12.4	22.3	11.2	22.1	7.7	10.6			

Other factors that promote frequent home preparation of lamb (at least weekly) by ethnic lamb consumers according to the survey include<sup>1</sup>:

- *Age* - less than 50 years old 67% (age 50 or older 57%);
- *Gender* - males 66% (females 52%);
- *Marital status* - married 65% (single 45%);
- *Number in the household* - 3 or less in household 54% (more than 3 in household 63%); and
- *Employment status*<sup>2</sup> – Employed 63% (unemployed 41%).

Interestingly, older respondents indicated less frequent home preparation of lamb than younger respondents, dispelling the myth that lamb consumers tend to be the older groups of people, at least as far as ethnic consumers are concerned (Table 3). Also, among ethnic lamb consumers, there is a tendency for small households (2 or less people) to prepare lamb at home less frequently than larger households. For smaller ethnic households, which tend to be older couples or single individuals, the cost of lamb per person is higher than for a household with more members making lamb a more economical meal for larger households on a cost per person basis.

#### ***Frequency of Ethnic Lamb Purchases Away From Home***

According to the survey, ethnic lamb consumers eat lamb away from home much less frequently than they prepare lamb at home (Figure 15) across nearly all demographic characteristics. Only 20% of the respondents indicated that they eat lamb at restaurants at least weekly compared to the 60% who prepare lamb at home at least weekly. The results were similar when respondents were asked about their frequency of lamb consumption at the homes of friends or relatives.

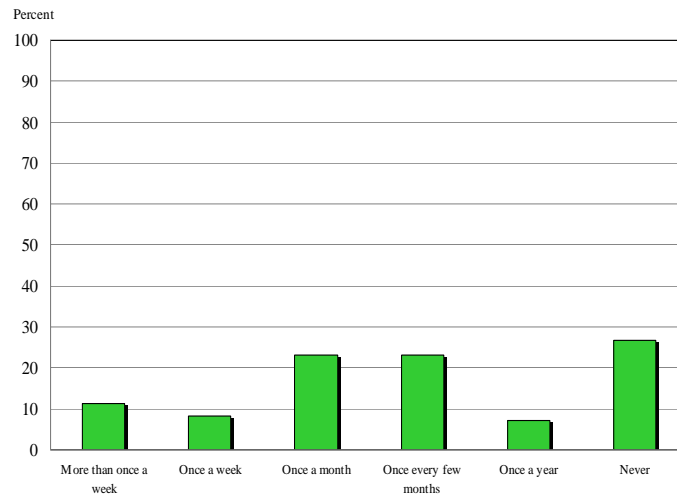
<sup>1</sup> Only those demographic characteristics of the survey respondents for which the percentages of respondents are substantially different among the categories of that characteristic are listed here. So, for example, since “household income” is not listed here, that means that there is little difference in the percentages among income groups of those who prepare lamb at least weekly at home.

<sup>2</sup> Employed: part-time or full-time at home or outside the home; Unemployed: No current job, retired, student, other.

**Table 3: Frequency of Lamb Preparation at Home by Age (Row Percent)**

Age	More than once a week	Once a week	Once a month	Once every few months	Once a year	Never	Total	Mean	Std Dev
	----- % -----								
< 25	0.0	25.0	41.7	16.7	0.0	16.7	100.0	16.7	15.8
25-39	29.1	43.6	10.9	12.7	1.8	1.8	100.0	16.7	16.6
40-49	18.6	41.9	18.6	11.6	7.0	2.3	100.0	16.7	13.9
50-65	23.7	39.5	23.7	0.0	5.3	7.9	100.0	16.7	14.9
> 65	16.7	33.3	33.3	8.3	8.3	0.0	100.0	16.7	13.9
Mean	17.6	36.7	25.6	9.9	4.5	5.7			
Std Dev	11.0	7.6	12.1	6.3	3.5	6.8			

**Figure 15: How Often Do You Eat Lamb at a Restaurant?**



Factors that appear to have little influence on frequency of lamb consumption away from home include education level, gender, and employment status. On the other hand, race/ethnicity and religion are major determinants of frequency of lamb consumption away from home. More ethnic lamb consumers of Asian, Middle Eastern, and Eastern European origin eat lamb away from home at least once a week (33%, 21%, and 20%, respectively) than those of other origins. With respect to religion, more ethnic lamb consumers professing no religion at all eat lamb away from home at least once a week (50%) than those professing a specific religion. Almost 30% of those indicating an Asian-origin religion consume lamb at least once a week at a restaurant compared to 22% of Muslims, 15% of those of the Jewish faith, and 13% of Christians.

Other factors that promote frequent purchases of lamb at restaurants (at least weekly) by ethnic lamb consumers according to the survey include:

- Age - age 50 or older 28% (less than 50 years old 14%);
- Marital status - single 24% (married 18%);



- *Number in the household* - 3 or less in household 26% (more than 3 in household 13%); and
- *Household income level* – \$60,000/year or more 23% (less than \$60,000/year 19%).

The results for frequency of lamb consumption at the home of a friend or relative were similar. Ethnic lamb consumers appear to eat lamb less frequently away from home than at home. In summary, those who are more frequent consumers of lamb away from home include those that are older, single, live in smaller households, and have higher incomes.

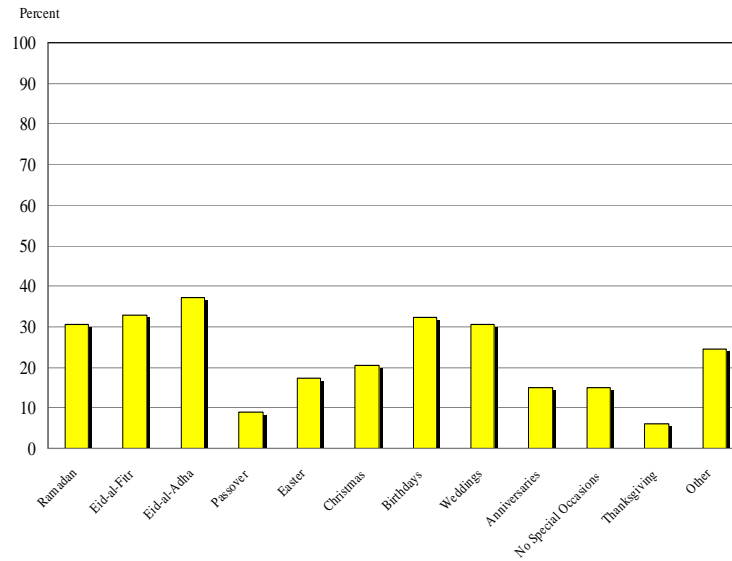
### ***Holidays and Special Occasions for Ethnic Lamb Consumption***

About one-third of the ethnic lamb consumers surveyed indicated that they prepare lamb for each of several holidays and special occasions, including Ramadan (31%), Eid-al-Fitr (33%), Eid-al-Adha (37%), birthdays (32%), and weddings (31%) (Figure 16). Fewer prepare lamb for Christian holidays (Christmas 20% and Easter 17%), anniversaries (15%), Passover (9%), and Thanksgiving (6%). About 15% of the respondents indicated that special occasions do not determine when they prepare lamb, primarily because they always have lamb regardless of whether or not the occasion is a holiday or other special event.

Not surprisingly, race/ethnicity and religion were the most important factors determining lamb preparation for holidays and special occasions. According to the survey, ethnic lamb consumers of all races/ethnicities and all religions as well as those professing no religion celebrate many non-religious special occasions by preparing lamb, primarily for weddings and birthdays. Of course most (but not all) of those of Middle Eastern origin prepare lamb for religious holidays, including Ramadan (46%), Eid-al-Fitr (51%) and Eid-al-Adha (58%) (Table 4). However, they also prepare lamb for other holidays and special occasions, including primarily weddings (42%), birthdays (36%), anniversaries (23%), and even traditional Christian holidays (Christmas 18% and Easter 14%). The same was generally true of those identifying themselves as either African American or Asian. Hispanics prepare lamb primarily for Christmas (32%) and birthdays (32%). Eastern Europeans are motivated to prepare lamb primarily for Easter (46%), Christmas (27%), and birthdays (27%). On the other hand, those identifying themselves as Western European prepare lamb primarily for either Passover (33%) or Easter (25%).

The breakdown of lamb preparation for holidays and special occasions by religion was predictably straight forward with Christians preparing lamb for Easter (44%), Christmas (46%), and birthdays (32%) (Table 5). Muslims and Jews prepare lamb for their respective religious holidays. Nearly 40% of Jews prepare lamb for Passover. Just over 60% of Muslims prepare lamb for Ramadan, 66% for Eid-al-Fitr, and nearly 76% for Eid-al-Adha. The higher preparation of lamb for Eid-al-Adha is not surprising since that holiday is known in the Islamic world as the "Festival of Sacrifice" to commemorate the willingness of Abraham to sacrifice his son Ishmael as an act of obedience to God before God intervened to provide him with a ram to sacrifice instead. Because God spared Ishmael, substituting a sheep in his stead, Muslims commemorate this occasion by slaughtering an animal, most often a young lamb, and distributing its meat among family, friends, and the needy as a special act of charity for the occasion. Many indicated that while they buy lamb from a trusted Halal butcher most of the rest of the year, they felt it important to hand pick a live, young, healthy lamb directly from producers for either on-site or custom slaughter for Eid-al-Adha. Given the infeasibility of personally selecting and purchasing a live lamb for that holiday in

**Figure 16: For What Religious Holidays/Special Occasions Do You Prepare Lamb?**



17

**Table 4: Holidays/Special Occasions for Lamb Preparation by Race/Ethnicity (Percent of Row Category)**

Race/Ethnicity	Beginning of Ramadan	Eid-al-Fitr	Eid-al-Adha	Passover	Easter	Christmas	Birthdays	Weddings	Anniversaries	Never	Other	Mean	Std Dev
	----- % -----												
West European	0.0	0.0	0.0	33.3	25.0	16.7	8.3	8.3	0.0	16.7	41.7	13.6	14.6
East European	0.0	0.0	0.0	9.1	45.5	27.3	27.3	18.2	0.0	18.2	36.4	16.5	16.2
Middle Eastern	45.5	50.6	58.4	9.1	14.3	18.2	36.4	41.6	23.4	10.4	23.4	30.1	17.2
Hispanic	0.0	0.0	0.0	5.3	15.8	31.6	31.6	15.8	5.3	26.3	31.6	14.8	13.5
Afro-American	42.1	36.8	36.8	0.0	21.1	21.1	36.8	26.3	10.5	5.3	15.8	23.0	14.2
Asian	29.6	33.3	37.0	0.0	11.1	18.5	29.6	25.9	14.8	14.8	51.9	24.2	14.3
Other	0.0	0.0	0.0	50.0	0.0	0.0	25.0	25.0	0.0	50.0	25.0	15.9	20.2
Mean	16.7	17.3	18.9	15.3	19.0	19.0	27.9	23.0	7.7	20.2	32.2		
Std Dev	22.0	22.8	25.4	12.4	12.5	5.9	10.5	11.4	9.2	7.2	12.9		

**Table 5: Holidays/Special Occasions for Lamb Preparation by Religion (Percent of Row Category)**

Religion	Beginning of Ramadan	Eid-al-Fitr	Eid-al-Adha	Passover	Easter	Christmas	Birthdays	Weddings	Anniversaries	Never	Other	Mean	Std Dev
	----- % -----												
Christian	2.4	2.4	0.0	4.9	43.9	46.3	31.7	22.0	9.8	14.6	34.1	19.3	17.3
Muslim	61.0	65.9	75.6	3.7	11.0	15.9	39.0	41.5	20.7	3.7	22.0	32.7	25.6
Jewish	0.0	0.0	0.0	38.5	0.0	0.0	26.9	23.1	15.4	30.8	42.3	16.1	16.9
Asian	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	28.6	85.7	11.7	26.2
None	0.0	0.0	0.0	0.0	12.5	25.0	25.0	12.5	0.0	50.0	12.5	12.5	15.8
Other	0.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	33.3	16.7	6.1	11.2
Mean	10.6	11.4	12.6	7.8	14.0	14.5	20.4	18.9	7.6	26.8	35.5		
Std Dev	24.7	26.7	30.9	15.2	16.2	18.7	16.6	13.8	9.1	16.0	27.0		

many cases, many indicated that they work through a trusted butcher or other lamb buyer to select and slaughter the appropriate age and quality of young lamb for their celebration. This year (2011) in North America, Eid-al-Adha will begin on November 7 and last three days.

While education level and employment status appeared to have little effect on ethnic lamb consumers' preparation of lamb for holidays and special occasions, most other demographic characteristics of the survey respondents had some effect. Most of those who prepare lamb for many holidays and special occasions are less than age 50. For example, 37% of all survey respondents less than age 50 indicated they prepare lamb for Eid-al-Adha and only 17% of those 50 and over. The same is the case for birthdays and weddings. For Christmas, Easter, and Passover, age appeared to have little effect on lamb preparation for holidays and special occasions.

Gender also impacts the preparation of lamb by ethnic lamb consumers for holidays and special occasions with a larger share of males indicating that lamb is prepared for Eid-al-Adha (41%) compared to females (32%). The case is similar for other Muslim holidays. On the other hand, a larger share of females indicated that lamb is prepared for most other non-religious holidays and other special occasions, including birthdays (38% females and 25% males) and weddings (37% females and 23% males).

Marital status also appears to play a role in lamb preparation by ethnic lamb consumers for primarily Muslim holidays. A larger share of married respondents than single respondents prepare lamb for Eid-al-Adha (40% compared to 28%) and other Muslim holidays. However, marital status plays little role in lamb preparation for other holidays.

For almost all holidays and special occasions, a much larger share of survey respondents from larger households (4 or more members) prepare lamb for holidays and special occasions than those from smaller households. For example, 46% of respondents from larger households prepare lamb for Eid-al-Adha compared to 26% of those from smaller households. The same is the case for birthdays (40% vs. 23%, respectively), weddings (36% vs. 24%, respectively), Christmas (26% vs. 14%, respectively), and Easter (21% vs. 13%, respectively).

Income level is also important in the preparation of lamb for holidays and special occasions by the survey respondents. A larger share of the lower household income respondents (less than \$60,000/year) prepare lamb for Muslim holidays than higher income respondents. On the other hand, a larger share of the higher income respondents (\$60,000/year and over) prepare lamb for most other holidays and special occasions than lower household income respondents. For example, 34% of higher household income respondents prepare lamb for Ramadan compared to 24% of those with higher household incomes. However, lamb is prepared for Christmas and weddings by a larger share of respondents with higher household incomes (28% and 39%, respectively) than those from lower income households (14% and 24%, respectively).

In summary, the preparation of lamb for holidays and special occasions by the respondents to the ethnic consumer lamb survey predictably follow race/ethnicity and religious traditions. Nevertheless, various other demographic characteristics of the respondents have an impact, notably age, household size, and income level.

### ***Reasons for Choice of Store to Purchase Lamb***

The reasons people purchase foods and other products at the locations of their choice provide insights into the specific food characteristics they value. When asked why they buy lamb at the location where the interview took place, 20% responded that they wanted to be sure that the lamb was either Halal or Kosher. The second most frequent response (17% of respondents) related to being assured that the lamb was fresh. Almost 13% indicated that they bought lamb at that location simply because it was in a convenient location. Trust and confidence in the owners and staff of the store was a reason 12% of the respondents gave for shopping for lamb at that location. Another 11% said that they chose that location because of the selection and availability of the cuts they wanted. Only 8% indicated that the prices were what brought them to the store while 4% indicated that they usually go other places for their lamb.

### ***Ethnic Lamb Consumption Behavior and Preferences***

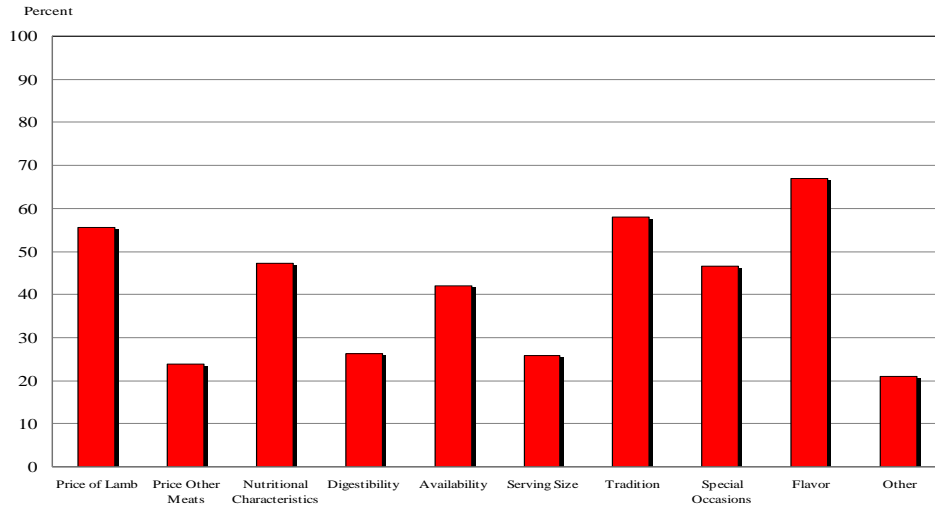
In this second section of the survey, ethnic lamb consumers were asked to share insights about the primary factors affecting their lamb purchases, their understanding of the terms “strong” and “mild” lamb and their preferences for each, factors that would need to change before they would be willing to increase their consumption of lamb, what other meats or food products they consider to be substitutes for lamb, their preferences and perceptions regarding American and imported lamb, and the cuts of lamb they normally purchase.

### ***Factors Influencing Ethnic Lamb Purchasing Behavior***

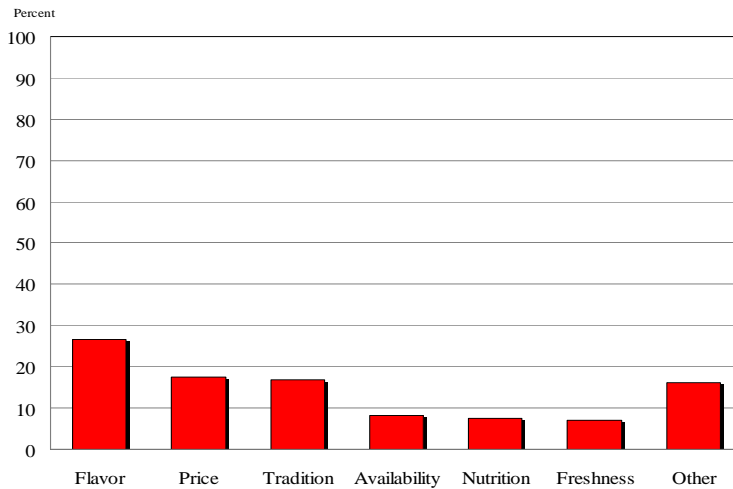
The ethnic lamb consumer survey respondents were asked to review a list of nine factors that could possibly influence people’s lamb purchases and then to select all those that influence their own behavior in purchasing lamb. The top three factors influencing lamb purchase decisions selected by more than half of all survey respondents included flavor (67% of respondents), tradition (58% of respondents), and the price of lamb (56% of respondents) (Figure 17). Other factors selected by a large share of the respondents included nutritional characteristics of lamb (47%), holidays and special occasions (47%), and the availability of lamb for purchase (42%). Other factors such as the price of other meats, the digestibility of lamb, and serving size were selected by only 25% or fewer respondents.

When asked to name the single most important factor influencing their lamb purchasing decisions, there was no overwhelming single choice. Flavor was named as the most important factor by the most respondents (27%) followed by price (17%) and tradition (17%) (Figure 18). When those who selected flavor as an important factor were asked what they like about the flavor of lamb, the top four responses, together accounting for over half of the respondents, included “lamb is just good” (19%), the flavor of lamb is good when prepared properly (14%), the taste of lamb is different/distinct from other meats (12%), and lamb is more tender than other meats (11%). Other responses included lamb is: (1) young, 7%, (2) soft, 4%, (3) fresh, 4%, (4) moist/juicy, 4%, (5) sweet, 3%, (6) traditional, 3% and (7) other, 18%.

**Figure 17: What Factors Influence Your Purchases of Lamb?**



**Figure 18: What Is the Most Important Factor Influencing Your Lamb Purchases?**



The order and importance of the factors influencing lamb purchases by ethnic consumers was little affected by most demographic characteristics except race/ethnicity and religion. Among West Europeans, price was considered to be an important factor by the vast majority (75%) while most East Europeans considered flavor to an important influencer of lamb purchases (73%) (Table 6). On the other hand, more Middle Easterners considered tradition and flavor to be important factors (69% and 62%, respectively) while more Hispanics considered price (68%) or flavor (63%) to be important influencers of lamb purchases. Those of Asian origin and African Americans selected flavor most often (63% and 84%, respectively) as an important influencer of their lamb purchases.

Most Christians (71%) also considered flavor to be an important factor in their lamb purchases (Table 7). Almost an equal number of Muslims considered tradition, flavor, and special occasions as the important factors (68%, 67%, and 63%, respectively). Price was an important factor for fewer Muslims (54%). Those of the Jewish faith most often named price and flavor as important

**Table 6: Factors Influencing Ethnic Lamb Purchases by Race/Ethnicity (Percent of Row Category)**

Race/Ethnicity	Lamb Price	Other Meat Prices	Nutritional Characteristics	Digestibility	Availability of Lamb	Serving Size	Tradition	Special Occasions	Flavor	Other	Mean	Std Dev
----- % -----												
W. European	75.0	41.7	25.0	8.3	41.7	16.7	16.7	0.0	58.3	33.3	31.7	23.2
E. European	36.4	0.0	36.4	18.2	36.4	0.0	54.5	54.5	72.7	18.2	32.7	23.9
Mid-Eastern	54.5	19.5	46.8	24.7	41.6	40.3	68.8	55.8	62.3	19.5	43.4	17.7
Hispanic	68.4	31.6	47.4	31.6	36.8	10.5	47.4	42.1	63.2	5.3	38.4	20.2
Afro-Amer.	47.4	26.3	68.4	52.6	42.1	21.1	52.6	57.9	84.2	10.5	46.3	22.3
Asian	48.1	29.6	48.1	22.2	48.1	7.4	59.3	37.0	66.7	33.3	40.0	17.7
Other	75.0	25.0	25.0	0.0	25.0	50.0	25.0	0.0	75.0	25.0	32.5	26.5
Mean	57.8	24.8	42.4	22.5	38.8	20.8	46.3	35.3	68.9	20.7		
Std Dev	14.4	14.1	14.4	15.0	4.3	14.0	17.8	21.8	9.3	11.5		

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**Table 7: Factors Influencing Ethnic Lamb Purchases by Religion (Percent of Row Category)**

Religion	Lamb Price	Other Meat Prices	Nutritional Characteristics	Digestibility	Availability of Lamb	Serving Size	Tradition	Special Occasions	Flavor	Other	Mean	Std Dev
----- % -----												
Christian	61.0	36.6	36.6	34.1	39.0	19.5	53.7	41.5	70.7	12.2	40.5	17.7
Muslim	53.7	22.0	54.9	31.7	47.6	32.9	68.3	63.4	67.1	17.1	45.9	18.8
Jewish	53.8	7.7	26.9	11.5	23.1	19.2	42.3	15.4	50.0	46.2	29.6	17.0
Asian	57.1	14.3	85.7	14.3	42.9	0.0	57.1	28.6	57.1	14.3	37.1	27.1
None	37.5	12.5	37.5	0.0	37.5	12.5	12.5	25.0	62.5	25.0	26.3	18.1
Other	50.0	50.0	50.0	0.0	50.0	33.3	50.0	16.7	100.0	16.7	41.7	27.5
Mean	52.2	23.8	48.6	15.3	40.0	19.6	47.3	31.8	67.9	21.9		
Std Dev	8.1	16.3	20.8	14.9	9.6	12.7	19.1	18.2	17.3	12.7		

factors (54% and 50%). Those professing an Asian-origin religion overwhelmingly selected nutritional characteristics as an important factor (86%).

### *Ethnic Lamb Consumer Perceptions of and Preference for “Mild” and “Strong” Lamb*

The terms “mild” and “strong” are often used in the media and elsewhere to describe lamb meat. While producing a list of possible meanings of those two terms as they apply to lamb meat is a simple task, the real question is what concepts those terms convey to current and potential lamb consumers. Because many ethnic consumers have long experience with lamb meat, they are an excellent “test” group to use to investigate the particular messages those two terms convey to current and potential lamb consumers. Consequently, the survey respondents were first asked to express what the terms “strong lamb” and “mild lamb” mean to them and then to indicate their preference for “mild” versus “strong” lamb.

When asked to express what the term “strong” lamb means to them with no prompting from the interviewer, 73% responded with negative concepts, including “old,” “mutton,” or “chewy” (21%), “smelly” (11%), “gamey” (10%), “bad flavor” (5%), and “fatty” (3%). However, nearly 14% answered with positive concepts like “good flavor,” “fresh,” “good quality,” and “lamb is not strong.” The remaining 14% answered with seemingly neutral terms like “spicy,” “spiced,” “seasoned,” “male,” and “imported.”

When asked to do the same for the term “mild” lamb, nearly 60% of the respondents answered with positive concepts, such as “young,” “good,” “tender,” “lean,” “fresh,” “clean,” “not smelly,” “soft,” “cooks easier,” “easy to eat,” “sweet,” and “not gamey.” Only 7% suggested negative concepts like “not good,” “fatty,” and “seasoned poorly.” Most of the other concepts expressed were neutral, including concepts like “bland,” “unspiced,” “low seasoning,” and “American.”

To determine whether the largely negative characterization of the word “strong” and the largely positive characterization of the word “mild” by the survey respondents was consistent with their stated preferences for “strong” and “mild” lamb, they were asked to indicate which of the two types of lamb they prefer and why. By a margin of nearly 2.5 to 1, the survey respondents indicated that they prefer “mild” lamb (68%) to “strong” lamb (28%). Only 4% stated a preference for both types of lamb. When asked the reason for their stated preferences, those who stated a preference for “mild” lamb responded primarily with “taste” (35%), “less smelly” (11%), “tender” (8%), “cooks easier” (6%), “lean” (6%), “young” (4%), and “no spice” (6%). The reasons for preferring “strong” lamb included “taste” (32%), “just used to it” (16%), “spice” (11%), and a wide variety of other responses.

The preference for “mild” lamb over “strong” lamb holds up over all demographic characteristics, including race/ethnicity and religion. Hispanics had the strongest preference for “mild” as compared to “strong” lamb (81% compared to 13%) whereas East Europeans were more ambivalent on preference between the two (50% “mild” and 50% “strong”). Nevertheless, 42% of all respondents indicating a preference for “mild” lamb were of Middle Eastern origins. Together, Muslims and Christians accounted for about two-thirds of those who indicated a



preference for “mild” lamb. Other demographic characteristics primarily associated with those ethnic lamb consumer survey respondents expressing a preference for “mild” lamb included:

- *Age* – Age 50 and over 76% (less than age 50 64%)
- *Education* – Less education (high school or less) 75% (more education 65%);
- *Gender* – female 72% (male 64%);
- *Number in the household* – larger households (4 or more members) 70% (smaller households 66%); and
- *Employment status* – Unemployed 81% (employed 64%).

Over half (51%) of the ethnic lamb consumer survey respondents preferring “strong” lamb were of Middle Eastern origins and 44% were Muslim, 23% Christian, and 21% Jewish. Other demographic characteristics primarily associated with those respondents who indicated a preference for “strong” lamb included:

- *Age* – Less than 50 years old 32% (age 50 and over 22%);
- *Education* – More education (at least some college) 31% (less education 23%);
- *Gender* – male 33% (female 24%);
- *Marital status* – single 33% (married 26%);
- *Number in the household* – smaller households (3 or fewer members) 33% (larger households 24%); and
- *Employment status* – employed 33% (unemployed 14%).

### ***Changes in Lamb Required for Ethnic Consumers to Purchase More Lamb***

To determine their current level of satisfaction (or concerns) with available lamb, the respondents were asked to list what would need to change about the lamb available to them before they would be willing to purchase more lamb. The top three responses accounting for a total of over half of all the responses were “price” (36%), “leaner” (12%) and “nothing” (9%). Other responses included “better selection/availability/cuts” (7%), “healthier/less chemicals” (7%), “more fresh/not frozen” (5%), “less smelly” (3%), and a variety of other less frequent responses.

Perhaps not surprisingly, “price” was the top choice of characteristics of lamb that would have to change before the respondents would be willing to buy more lamb across virtually all demographics including race/ethnicity and religion. Price was the top choice for factor that needs to change by nearly 60% of all African Americans and about half of all Hispanics and Western and Eastern Europeans compared to only 35% of those from the Middle East and 22% for those from Asia. The largest percentage of those from the Middle East and Asia (18% of each race/ethnicity) ranked “leaner” higher than respondents from other races/ethnicities.

Among religions, a smaller percentage of Muslims (34%) than those of any other religion indicated “price” as the top factor that would have to change for them to be willing to buy more lamb. Muslims had a much wider array of concerns including leanness, freshness, healthiness, and a host of other issues. At the same time, a larger percentage Jewish respondents (50%) listed “price” as the top factor impeding them from buying more lamb. Jewish respondents were also less concerned about anything other than price except leanness (35% of Jewish respondents).

Christians and those of Asian-origin religions were concerned primarily about the “price” of lamb (42% and 43%, respectively).

Other important characteristics of the respondents who indicated “price” as a feature of lamb that would have to change include the following:

- *Age* –age 50 and over 67% (less than 50 58%);
- *Gender* –females 47% (males 32%);
- *Number in the household* – smaller households (3 or fewer members) 67% (larger households 55%);
- *Employment status* –employed 66% (unemployed 41%); and
- *Household income level* – income over \$60,000/year 64% (lower annual income 56%).

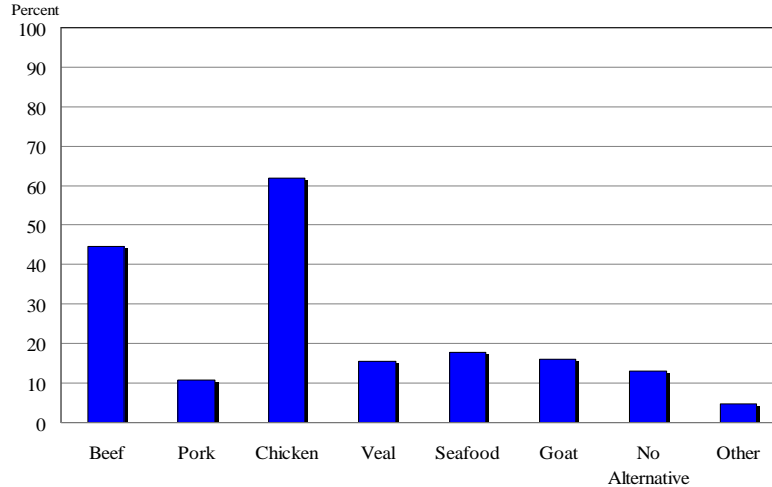
### ***Substitutes for Lamb As Perceived by Ethnic Lamb Consumers***

Given the relatively high price of lamb and some perceived problems of availability of lamb as previously indicated, a particular concern for lamb producers is how consumers react in their purchasing behavior to these forces. That is, when the price of lamb is perceived to be high or lamb is not available, do consumers purchase other meats or foods instead? If so, what other meat or foods do they purchase? To probe for an answer to these questions for ethnic lamb consumers, the survey asked the respondents to indicate all the meats (including seafood) that they might buy instead of lamb if they perceived that lamb was priced too high or was not available at the time they were considering purchasing lamb. The respondents were allowed to choose any or all of a list of meats, including beef, pork, chicken, veal, seafood, and goat meat. They were also allowed to indicate any other meats or foods not on the list that they considered to be substitutes for lamb. The majority of the respondents (62%) answered that “chicken” would be a viable substitute for lamb (Figure 19). Only 45% indicated “beef” as a substitute for lamb while only 18% answered “seafood,” 16% “veal,” 16% “goat,” and 11% “pork.” About 13% of the respondents indicated that there is “no alternative” to lamb with comments like “When I want lamb, I want lamb,” “If I can’t find lamb here, I’ll just go somewhere else to find it,” and “When we want lamb, the price doesn’t matter much because we want lamb.”

The findings that beef is an acceptable substitute for lamb while pork is not are consistent with the findings of research on the demand for lamb published over the last several decades (Williams, Capps, and Dang 2010). However, the finding that chicken is considered a substitute for lamb for a majority of ethnic consumers is not consistent with the findings of that literature. Statistical analyses of lamb demand since the 1970s over a wide range of studies have consistently concluded that poultry is not a statistically significant substitute for lamb. The results of this survey suggest the need for researchers to look more closely at the relationship between the consumption of lamb and chicken in future studies since the fastest growing segment of ethnic consumers appears to consider chicken more of a substitute than has been the case among lamb consumers in general in the past.

Demographic characteristics made some difference as to which meats or foods the respondents considered to be acceptable substitutes for lamb. Again, the greatest divergence in responses was among race/ethnic groups and religious affiliations. A greater share of West Europeans and Hispanics considered beef an acceptable substitute (75% and 63%, respectively) than those from

**Figure 19: What Meats or Foods Are Considered Substitutes for Lamb?**



the Middle East (44%), Asians (37%), Eastern Europeans (36%), or African Americans (21%) (Table 8). A large majority (60% to 70%) of respondents of all race/ethnicities consider chicken an acceptable alternative to lamb except West Europeans (42%) and Asians (48%). More Asians and African Americans find seafood an acceptable substitute for lamb (30% and 26%, respectively) than those of other race/ethnicities. Goat meat is a substitute for a larger share of African Americans (32%), West Europeans (25%), and Asians (22%) than respondents of other races/ethnicities.

A larger share of Christians and Jews considered beef an acceptable lamb substitute (54% and 58%, respectively) than did Muslims (35%) or those professing a religion of Asian origin (29%) (Table 9). However, more Muslims (63%) and Jews (69%) considered chicken as an acceptable lamb substitute than Christians (51%) or those of Asian-origin religions (29%). About 42% of respondents of Asian-origin religions indicated seafood as an acceptable alternative to lamb compared to about 20% for Christians and Muslims and only 4% for Jews. Pork was considered a lamb substitute primarily by Christians (32%) and those of Asian-origin religions (29%). Goat meat was indicated as an acceptable substitute for between 15% and 18% of the respondents for all religions.

These results suggest that the meats or foods that might be considered by ethnic consumers as center-of-plate substitutes for lamb depends on the specific demographic characteristics of the ethnic consumer. A likely profile of the ethnic lamb consumers most likely to find various meats or seafood to be acceptable substitutes for lamb emerges from a synthesis of the survey responses. The profiles below relate to the “typical” ethnic lamb consumer most likely to hold the respective perceptions<sup>3</sup>:

<sup>3</sup> Only those demographic characteristics of the survey respondents are shown by the survey results to affect the perceptions of the respondents of the specific meat as a lamb substitute are included in the consumer profile for each. So, for example, since “age” is not mentioned as a component of the profile of those who consider chicken to be a substitute for lamb, that means that there is little difference in the percentages across age groups of those who consider chicken a substitute for lamb.

**Table 8: Substitutes for Lamb by Race/Ethnicity (Percent of Row Category)**

Race/Ethnicity	Beef	Pork	Chicken	Veal	Seafood	Goat	Other	Mean	Std Dev
	----- % -----								
West European	75.0	25.0	41.7	8.3	0.0	25.0	33.3	29.8	24.5
East European	36.4	9.1	72.7	9.1	9.1	18.2	9.1	23.4	24.0
Middle Eastern	44.2	0.0	62.3	23.4	11.7	14.3	15.6	24.5	21.5
Hispanic	63.2	31.6	68.4	15.8	21.1	5.3	15.8	31.6	24.7
Afro-American	21.1	10.5	68.4	0.0	26.3	31.6	10.5	24.1	22.3
Asian	37.0	18.5	48.1	11.1	29.6	22.2	22.2	27.0	12.4
Other	50.0	25.0	100.0	0.0	0.0	25.0	25.0	32.1	34.5
Mean	46.7	17.1	66.0	9.7	14.0	20.2	18.8	29.8	24.5
Std Dev	19.7	11.5	12.5	7.8	11.3	9.1	8.9	23.4	24.0

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**Table 9: Substitutes for Lamb by Religion (Percent of Row Category)**

Religion	Beef	Pork	Chicken	Veal	Seafood	Goat	Other	Mean	Std Dev
	----- % -----								
Christian	53.7	31.7	51.2	12.2	17.1	17.1	14.6	28.2	17.7
Muslim	35.4	0.0	63.4	17.1	19.5	18.3	15.9	24.2	20.1
Jewish	57.7	3.8	69.2	23.1	3.8	15.4	38.5	30.2	25.8
Asian	28.6	28.6	28.6	0.0	42.9	14.3	14.3	22.4	13.9
None	50.0	12.5	75.0	12.5	0.0	25.0	0.0	25.0	28.0
Other	50.0	16.7	83.3	0.0	0.0	16.7	0.0	23.8	31.7
Mean	45.9	15.5	61.8	10.8	13.9	17.8	13.9		
Std Dev	11.4	12.8	19.6	9.3	16.5	3.8	14.1		

- *Beef* - Married male under age 50 with a household income of more than \$60,000 of a Western European or Hispanic race/ethnicity, and either a Jew or Christian;
- *Chicken* - Married female with a large household (4 or more members) who is either a Muslim or a Jew;
- *Seafood* - Anyone of Asian race/ethnicity and Asian religion or African American or Hispanic race/ethnicity;
- *Goat* - Single, employed (part-time or at home) female with a smaller household (3 or fewer members) of Asian race/ethnicity and religion or Western European or African American race/ethnicity; and
- *Pork* - Older (over 50 years of age), less well educated (high school or less), unemployed male from a smaller household (3 or fewer members) of Asian race/ethnicity and religion or Hispanic Christian.

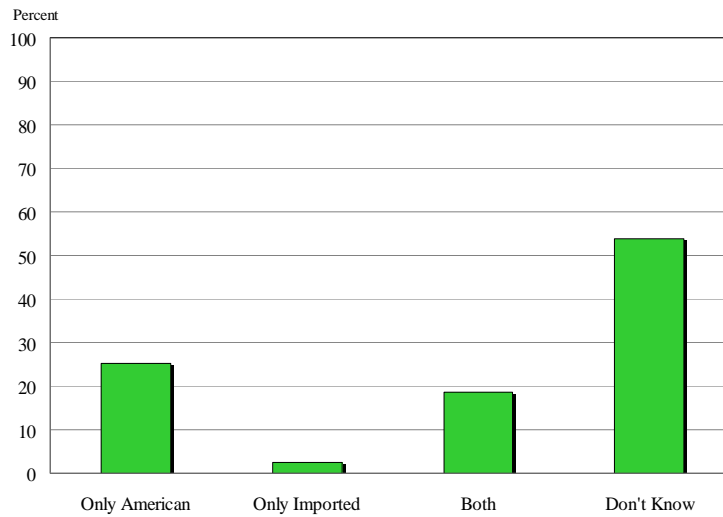
### ***Preferences for American vs. Imported Lamb in Ethnic Lamb Purchasing***

Both American and imported lamb are available to ethnic lamb consumers but little is known about which they tend to buy and their perceptions of lamb from those two different origins. Consequently, the survey asked the ethnic lamb consuming respondents to indicate whether they know if they buy American or imported lamb (or both). Then those who knew the origin of the lamb they buy were asked to explain why they bought lamb from those origins. Finally, those who knew the origin of the lamb they buy were asked to rank on a scale of 1 to 10 the extent to which they perceive that American lamb is better quality, is more available, is lower priced, and has better flavor than imported lamb.

### **Ethnic Lamb Consumer Awareness of Lamb Origin**

More than half of the respondents (54%) indicated that they did not know the country of origin of the lamb they buy (Figure 20). Also, the largest majority of respondents of all races/ethnicities and religions indicated that they did not know the origin of the lamb they purchase (Table 10). Hispanics, however, were particularly unaware with 84% responding that they did not know the origin of the lamb they purchase. Also, 63% of African Americans and over half (53%) of those of Middle Eastern races/ethnicities responded that they did not know the origin of the lamb they purchase. West and East Europeans and Asians appeared to be more informed with 36% of both groups of Europeans and 41% of Asians indicating that they were unaware of the origin of the lamb they purchase. The overwhelming majority of the respondents of all religious groups indicated that they did not know the origin of the lamb they purchase (Table 11). The most unaware religious groups included those of Asian-origin religions (71%) followed by Christians (63%) and Jews (54%). Muslims were the most aware (or least unaware) of the origin of the lamb they purchase (48%).

**Figure 20: Do You Purchase American or Imported Lamb?**



**Table 10: American vs. Imported Lamb Buying Behavior by Race/Ethnicity (Row Percent)**

Race/Ethnicity	Only Imported	Only American	Both	Don't Know/Don't Care	Total	Mean	Std Dev
	----- % -----						
West European	9.1	18.2	36.4	36.4	100.0	25.0	13.6
East European	18.2	18.2	27.3	36.4	100.0	25.0	8.7
Middle Eastern	0.0	30.7	16.0	53.3	100.0	25.0	22.7
Hispanic	0.0	10.5	5.3	84.2	100.0	25.0	39.7
Afro-American	0.0	31.6	5.3	63.2	100.0	25.0	28.9
Asian	3.7	22.2	33.3	40.7	100.0	25.0	16.1
Other	0.0	25.0	25.0	50.0	100.0	25.0	20.4
Mean	4.4	22.3	21.2	52.0			
Std Dev	7.3	8.1	13.8	18.9			

**Table 11: American vs. Imported Lamb Buying Behavior by Religion (Row Percent)**

Religion	Only Imported	Only American	Both	Don't Know/Don't Care	Total	Mean	Std Dev
	----- % -----						
Christian	5.0	17.5	15.0	62.5	100.0	25.0	25.6
Muslim	0.0	33.8	18.8	47.5	100.0	25.0	20.4
Jewish	7.7	23.1	15.4	53.8	100.0	25.0	20.2
Asian	0.0	14.3	14.3	71.4	100.0	25.0	31.7
None	0.0	0.0	37.5	62.5	100.0	25.0	30.6
Other	0.0	16.7	33.3	50.0	100.0	25.0	21.5
Mean	2.1	17.5	22.4	58.0			
Std Dev	3.4	11.1	10.3	9.1			

### American vs. Imported Lamb Buying Behavior

About half of those who knew the origin of their lamb (25% of all respondents) purchased only American lamb (Figure 20). Only 2% indicated that they buy only imported lamb. The remaining nearly 20% of the respondents indicated that they purchase both American and imported lamb. Among race/ethnic groups, half of those who indicated that they purchase only imported lamb were of East European race/ethnicity even though only 18% of that group indicated they purchase only imported lamb (Table 10). The other two race/ethnicity groups indicating they buy only imported lamb were West Europeans (9%) and Asians (4%) who accounted for 25% each of those indicating that they buy only imported lamb. No respondents of Middle Eastern, Hispanic, or African American race/ethnicity indicated that they purchase only imported lamb. Two religious groups of survey respondents (Jews and Christians) each accounted for half of those who indicated they buy only imported lamb even though only a small percentage of those two groups actually purchase only imported lamb (8% of Jews and 5% of Christians) (Table 11).

Even though only 31% of Middle Eastern survey respondents indicated they buy only American lamb, they accounted for over half (55%) of those who buy only American lamb (Table 10). Nearly a third (32%) of African American lamb consumers surveyed buy only American lamb. A much smaller share of other races/ethnicities indicated that they buy only American lamb. Although no Muslims indicated that they were import-only lamb buyers, they accounted for the largest share of religious group respondents (64%) who buy only American lamb and also the largest share of those who buy both imported and American lamb (42%). Also, a larger share of Muslims than those of other religious groups (34%) indicated that they buy only American lamb. Muslims also accounted for the largest share of those who buy both American and imported lamb (19%) (Table 11).

Given the above discussion and the other demographic characteristics of the respondents, the profile of the ethnic lamb consumer who is likely least aware of the origin of the lamb they purchase, likely purchases only American lamb, likely purchases only imported lamb, or likely purchases both are the following:

- *Least aware of lamb origin* – Single Hispanic, African American, or Middle Eastern female, less than 50 years old and less educated (high school or less) from a small household (3 or less members) who is unemployed with lower household income (less than \$60,000/year);
- *Buys only American lamb* – Married Middle Eastern, African American, or Muslim male less than 50 years old with less education (high school or less) but employed full-time with higher household income (\$60,000/year or more);
- *Buys only imported lamb* – Single East European, Jewish or Christian male 50 years of age or older who is better educated (at least some college) and with a lower household income (less than \$60,000/year); and
- *Buys both American and imported lamb* – West or East European or Asian over 50 years of age who is better educated (at least some college) from a smaller household (3 members or less) and employed with higher household income (\$60,000/year or more).

### Reasons Why American or Imported Lamb Is Purchased

The top 3 reasons for buying only American lamb were “fresh/not frozen” (33%), “available” (17%), and “taste” (14%). Other responses included “halal/kosher” (6%), “good quality” (6%), “lean” (3%), “raised well” (3%), “killed here” (3%), “healthy/clean/safe” (3%), and a variety of other less frequent responses. The top 5 reasons for buying only imported lamb included “price” (17%), “availability” (12%), “good quality” (10%), “good reputation” (7%), and “organic” (7%). Other responses included “there’s really no difference” (7%), “halal/kosher (5%), “taste” (5%), and a wide variety of less frequent responses.

### Impressions of American vs. Imported Lamb Characteristics

Survey respondents who indicated that they buy American and/or imported lamb were highly favorable regarding the quality, availability, price, and flavor of American lamb relative to imported lamb (Figure 21). On a scale of 1 (strongly disagree) to 10 (strongly agree), the respondents agreed on average that, compared to imported lamb, American lamb is always better quality (average score of 7.8), is always more available (average score of 8.7), is always lower priced (average score of 7.3), and has better flavor (average score of 8.1). In relative terms, the respondents had a more positive impression of the availability and flavor of American lamb compared to imported lamb than of the quality and price of American lamb compared to imported lamb.

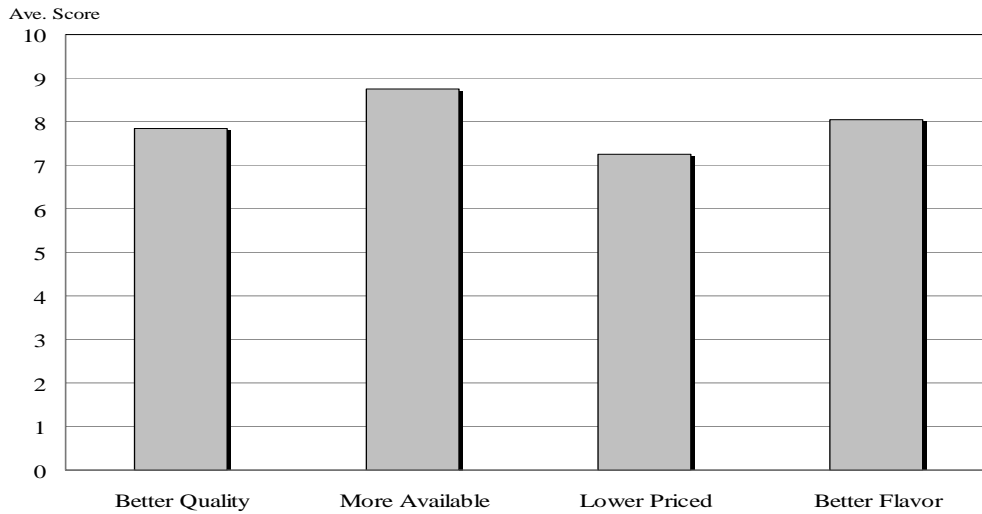
### ***Lamb Cut Normally Purchased by Ethnic Consumers***

To determine what cuts of lamb are most popular among ethnic consumers, the survey asked the respondents to indicate all the cuts of lamb that they normally purchase. The most popular cuts of lamb among the survey respondents, in order, were rib/loin chops (48% of respondents), leg roasts (48% of respondents), and shoulder chops (44% of respondents) (Figure 22). A smaller share of the respondents indicated they also purchase shanks (35%), lamb for stew (34%), ground lamb (28%), and shoulder roasts (25%). Only 17% of the respondents also normally purchase rib roasts/racks. Only 8% normally purchase loin roasts and only 3% normally purchase spare ribs.

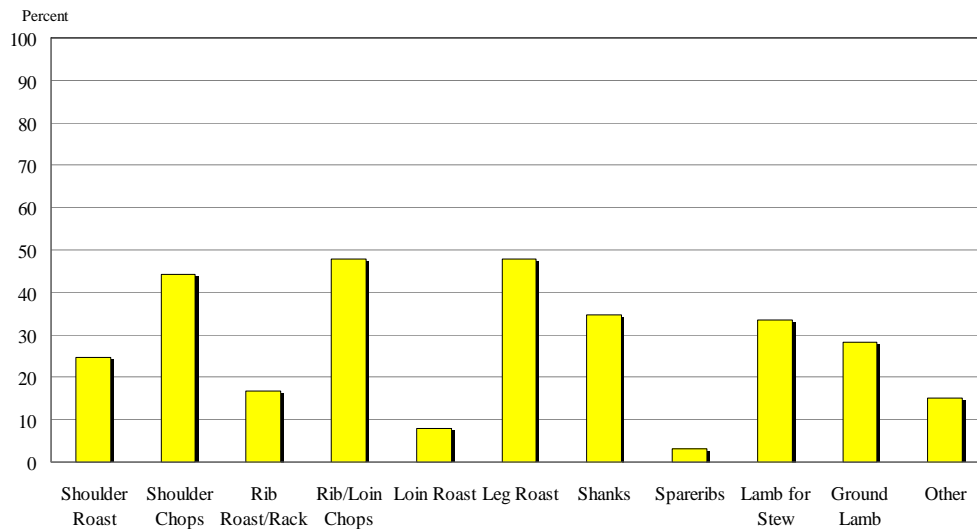
Although rib chops was the most popular cut overall, among those of Middle Eastern race/ethnicity shoulder chops (blade and arm) were the most popular cut purchased by 52% of those respondents (Table 12). The number one choice of Hispanics was leg roasts (53%) while an equal share of Asians and Eastern Europeans purchase both rib/loin chops and legs (56% and 55%, respectively). Respondents from the Middle East and Eastern Europe accounted for the largest shares of any race/ethnic group purchasing shanks (42% and 36%, respectively). Lamb for stew was a consistent purchase across most race/ethnic groups. Respondents from the Middle East and Asia accounted for the largest shares of any race/ethnic group purchasing ground lamb (35% and 37%, respectively).



**Figure 21: Compared to Imported Lamb, How Much Do You Agree that American Lamb is ...?**  
(Scale of 1 to 10)



**Figure 22: What Cuts of Lamb Do You Normally Purchase?**



Among religious groups, a larger share of Muslims than any other religious group purchased shoulder chops (42%), shoulder roasts (29%), lamb for stew (38%), and ground lamb (40%). Nearly equal shares of Christians, Muslims, and those of Asian-origin religions purchase legs (56%, 54%, and 57%, respectively) (Table 13). The only religious group whose respondents indicated that they purchase lamb spare ribs were Muslims (6%). Loin roasts were purchased only by Jews (12%), Christians (10%), and Muslims (7%).

**Table 12: Cuts of Lamb Normally Purchased by Race/Ethnicity (Percent of Row Category)**

Race/Ethnicity	Boneless	Shoulder	Rib	Rib or	Loin	Leg	Shanks	Spareribs	Lamb	Ground	Other	Mean	Std Dev
	shoulder	chops		loin									
	roast	(blade & arm)	roast/rack	chops	roast	roast			for	lamb			
	----- % -----												
West European	0.0	50.0	8.3	41.7	8.3	41.7	33.3	0.0	25.0	25.0	8.3	22.0	18.0
East European	27.3	36.4	27.3	54.5	0.0	54.5	36.4	0.0	36.4	9.1	9.1	26.4	19.7
Middle Eastern	32.5	51.9	15.6	39.0	10.4	46.8	41.6	5.2	36.4	35.1	20.8	30.5	15.3
Hispanic	10.5	26.3	15.8	47.4	15.8	52.6	26.3	0.0	21.1	5.3	10.5	21.1	16.5
Afro-American	21.1	31.6	21.1	68.4	0.0	42.1	15.8	0.0	31.6	21.1	10.5	23.9	19.6
Asian	22.2	40.7	11.1	55.6	3.7	55.6	25.9	3.7	37.0	37.0	7.4	27.3	19.4
Other	25.0	25.0	50.0	50.0	0.0	0.0	75.0	0.0	25.0	25.0	25.0	27.3	23.6
Mean	19.8	37.4	21.3	50.9	5.5	41.9	36.3	1.3	30.3	22.5	13.1		
Std Dev	11.8	10.1	6.8	10.8	6.3	6.2	9.1	2.3	6.8	13.1	4.9		

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**Table 13: Cuts of Lamb Normally Purchased by Religion (Percent of Row Category)**

Religion	Boneless	Shoulder	Rib	Rib or	Loin	Leg	Shanks	Spareribs	Lamb	Ground	Other	Mean	Std Dev
	shoulder	chops		loin									
	roast	(blade & arm)	roast/rack	chops	roast	roast			for	lamb			
	----- % -----												
Christian	22.0	29.3	12.2	43.9	9.8	56.1	19.5	0.0	26.8	9.8	14.6	22.2	16.3
Muslim	29.3	57.3	18.3	50.0	7.3	53.7	34.1	6.1	37.8	40.2	19.5	32.2	17.8
Jewish	19.2	42.3	19.2	38.5	11.5	7.7	61.5	0.0	30.8	19.2	7.7	23.4	18.2
Asian	14.3	14.3	0.0	57.1	0.0	57.1	14.3	0.0	14.3	14.3	14.3	18.2	20.3
None	25.0	25.0	37.5	50.0	0.0	50.0	50.0	0.0	37.5	12.5	0.0	26.1	20.5
Other	0.0	16.7	0.0	50.0	0.0	50.0	16.7	0.0	33.3	50.0	0.0	19.7	22.1
Mean	18.3	30.8	14.5	48.3	4.8	45.8	32.7	1.0	30.1	24.3	9.4		
Std Dev	10.3	16.4	14.1	6.4	5.4	18.9	19.5	2.5	8.8	16.7	8.2		

## **Ethnic Lamb Consumer Behavior in Preparing Lamb**

To better understand ethnic lamb consumer buying behavior, the respondents were asked to indicate how they prepare lamb for consumption in their homes. In general, respondents were eager to share how they prepare and cook lamb as they provided 539 separate responses to this question. Their responses are grouped into 4 categories: (1) preparation methods, (2) spices/ingredients used, (3) cooking methods; and (4) side dishes and garnishes (Table 14).

Prior to cooking lamb, many of the survey respondents indicated that they prepared the meat in some way first, including washing and cleaning the lamb (10% of the respondents) (Table 13). Others cut up or cube the lamb for various types of stews which vary widely across races/ethnicities (for example, laban omou – boiled cubed lamb simmered in yoghurt and flavored with spices like garlic and coriander) or grind/mince lamb for Kafta (lamb meatballs that are often grilled on skewers), Dolmeh (lamb stuffed grape leaves), Sfiha (Arab “pizza” made from fresh dough topped with spicy ground lamb meat, onions, and tomatoes), Greek meatballs, and many other types of widely popular ground lamb recipes. Many marinate the meat overnight. Some remove the fat before cooking although the fat is often rendered in various of the cooking methods (such as boiling).

Various spices and ingredients are added to flavor and give variety to the lamb dishes. Nearly 25% of the respondents mentioned specific types of spices used, including allspice, turmeric, Cavender’s Greek seasoning, 7 spice mix, Lawry’s, curry, coriander, and various other Mideastern, Indian, and other spices. Various traditional spices and ingredients were also mentioned, including most frequently onions/onion powder, garlic, salt, pepper, yoghurt, butter/margarine, and a host of less frequently mentioned spices and ingredients.

The most frequently mentioned method of cooking lamb was grilling or barbecuing (including Kafta) (45% of respondents). Other commonly mentioned cooking methods included baking (23%), boiling (21%), stewing (21%), roasting (17%), and broiling (13%). Some indicated that they simply pan fry lamb or make a soup with the meat and/or bones. Many of the Hispanics indicated that they use lamb meat in “barbacoa,” steamed in leaves. This Mexican dish is commonly referred to as “mixiotes de carnero” and is a specialty of the central Mexican states of Puebla, Tlaxcala, and Hidalgo. Mixiotes are flavored with two of the types of Mexican leaves, avocado leaves which are enclosed with the meat, and pencas de maguey (the Agave, or century plant). The inner layer of maguey leaves are used to wrap the meat which is usually marinated in a chili, onion, and tomato sauce. The wrapped meat is then placed in hot coals to steam or simply on a rack in a steamer or stockpot.

Side dishes frequently mentioned included couscous or rice (10% of the respondents) often with lamb stew or other lamb preparation spooned over the top. A wide variety of vegetables were also mentioned as accompaniments as well as potatoes and other side dishes.

Obviously, these lists of lamb preparation and cooking methods mentioned by the ethnic lamb survey responses do not begin to fully describe the wide range of lamb dishes and preparations by ethnic lamb consumers. However, these responses serve to illustrate the broad use that ethnic consumers make of lamb, the complexity and sophistication of ethnic lamb recipes, and the deep

**Table 14: How Do You Usually Prepare the Lamb You Purchase?**

<b>Preparation Method</b>	<b>Percent of Respondents</b>	<b>Spices/ Ingredients</b>	<b>Percent of Respondents</b>	<b>Cooking Methods</b>	<b>Percent of Respondents</b>	<b>Sides Dishes &amp; Garnishes</b>	<b>Percent of Respondents</b>
Wash/Clean	9.6	Spices <sup>1</sup>	24.1	Grill/BBQ/Kafta <sup>3</sup>	45.2	Couscous/Rice	9.6
Cut/Cube	6.0	Onions/Powder	17.9	Bake	22.9	Vegetables	6.6
Marinate	5.4	Garlic	8.3	Boil	21.1	Potatoes	1.8
Remove Fat	1.8	Salt	6.9	Stew	21.1	Tomato	1.8
Store Overnight	1.8	Pepper	6.2	Roast	16.9	Parsley	1.8
Soak	1.2	Oil	4.1	Broil	12.7	Okra	1.2
Dry Out/Let Sit	1.2	Herbs <sup>2</sup>	3.4	Fried	12.7	Carrots	1.2
Other	4.2	Sauce/Salsa/Chili	3.4	Soup	6.0	Other	4.8
		Lemon	2.8	Saute	4.8		
		Cilantro	2.1	Barbaoca/Chamorro <sup>4</sup>	3.0		
		Vinegar	2.1	Skewered/Kabab	2.4		
		Yoghurt	2.1	Other	9.6		
		Butter/Margarine	2.1				
		Butter	1.4				
		Chicken Broth	1.4				
		Other	11.7				

<sup>1</sup> All Spice, Turmeric, Sofrito Spices, Cavender's Greek Seasoning, 7 mix spices, Lawry's, curry, and various Mideastern, Asian, and other spices

<sup>2</sup> Herbs (general), Rosemary, Oregano

<sup>3</sup> Usually ground lamb rolled into a ball and grilled/barbecued on a wooden skewer.

<sup>4</sup> Lamb shank or other lamb cuts cooked in in pencas de maguey (banana leaves)

roots that lamb has in ethnic menus. Of particular interest is the finding that grilling and barbecuing are perhaps the most common method used to cook lamb. The interviews also revealed that many of the ethnic survey respondents often go to great lengths to eliminate the odor and taste of lamb fat from their lamb dishes. Many that boil lamb, for example, indicated that they do so in order to render the fat. Once that is done, the water is often thrown out and the meat is then used for stew or other dishes. Likewise, a number of respondents indicated that when they bake or broil lamb, they place the lamb on a rack in a pan in the oven so that the fat can melt off and drip into the pan below the meat. This is not surprising since the odor and taste of lamb fat was an expressed issue for many of the survey respondents.

### **Problems with Lamb Encountered by Ethnic Consumers**

To provide respondents an opportunity to express thoughts or perceptions that the survey may not have touched on, the last question asked the respondents to indicate any problems they may have encountered in purchasing or preparing lamb. Far and away the most frequent response was “none” (57% percent of respondents). The second most frequent answer mentioned by only 7% of the respondents related to the fat/cholesterol or other aspects of the healthiness of lamb. Another 7% complained about the time needed to purchase, prepare, and/or cook lamb.

Other survey respondents expressed concerns about the “smell” or “flavor” of lamb (4%), the “lack of preparation instructions” so that you just have to know how to cook lamb (3%), the “age” and/or “freshness” of lamb (2%), the “selection” or “availability” of lamb cuts (2%), the “quality” of lamb (2%), dealing with the “bones” in lamb (difficulty of deboning and/or scraping the meat off the bones) (2%), “imported” lamb (1%), and the serving size of lamb cuts (1%) among many others. Interestingly, despite concerns about the high price of lamb expressed in relation to earlier questions, only 2% of the respondents mentioned “price” as a problem in purchasing or preparing lamb.

### **CONCLUSIONS AND IMPLICATIONS FOR TARGETING PROMOTION TO ETHNIC LAMB CONSUMERS**

Perhaps the most important change in the U.S. lamb market over the last several decades is that lamb consumption is no longer declining despite the continued decline of U.S. sheep and lamb inventories and meat production. A recent study (NAS, 2008) suggests that U.S. consumers increasingly can be divided into two groups – a small group who consume lamb on a more or less consistent basis and all the rest who eat little or no lamb at all. Growing evidence suggests that the current divergence of lamb consumption from the trends in domestic production may be due to the lamb demand of the growing number of ethnic consumers in this country. Shiflett, Williams, and Rogers (2010) report that ethnic groups now account for nearly 60% of total U.S. lamb consumption and that ethnic demand could grow exponentially over the next forty years given current population growth rate estimates. They estimate that lamb consumption by ethnic groups in 2050 could well surpass current lamb availability by 60%. Thus, meeting the current and future lamb requirements of ethnic consumers is perhaps the greatest competitive challenge

and opportunity facing the U.S. lamb industry today. The key to successfully encouraging ethnic consumers to direct their growing demand towards domestic rather than foreign sources of lamb, however, is to understand their lamb needs and purchasing behavior to more effectively design and target promotion programs. This study provides a number of insights useful to structuring promotion programs to effectively impact the lamb preference structure and buying behavior of ethnic lamb consumers.

One of the more important points reinforced by this study is that there is no such thing as a “typical” ethnic lamb consumer. While some groups are closely related by religion, they are nonetheless widely diverse culturally, originating from many different countries, races, cultures, and ethnicities even within each religion. Those differences are strong drivers of their often divergent lamb buying and preparation behavior. Not surprisingly, we found that the two most important drivers are race/ethnicity and religion. However, we also find that demographic factors, including age, education, gender, marital status, household size, and income, have important effects on various aspects of ethnic lamb buying and preparation behavior. Also, price is a clearly important factor driving ethnic lamb purchasing behavior.

### **Profiles of Ethnic Lamb Consumers**

Based on those factors characterizing the majority of ethnic consumers in each case as indicated by the results of this study, the following profiles represent those groups most likely to exhibit the following key lamb purchasing and buying behaviors<sup>4</sup>:

#### Prepare Lamb at Home at Least Weekly

Married, employed, male under age 50 from a large household (4 or more) of Middle Eastern or Asian origins and Muslim or Jewish religion.

#### Eat Lamb at a Restaurant at Least Weekly

Married, age 50 or over with a small household (3 or fewer members) and a household income of \$60,000/year or more of Asian or Middle Eastern origins and Asian-origin or Muslim religion.

#### Influenced in Their Purchases by One of the Three Top Three Purchase Motivators<sup>5</sup>

- *Flavor* – East European, Middle Eastern, Hispanic, Asian, African American who are Christians, Muslims, or Jews.
- *Tradition* – Middle Eastern Muslim.
- *Price* – Western European, Hispanic, and/or Jewish.

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<sup>4</sup> Note that the profiles are built around those demographic characteristic most frequently associated with the corresponding lamb purchasing or preparation behavior (the “distinguishing” characteristics). Other demographic characteristics are important in each case but the ones that form the profiles are the most important in each case. Also, only those demographic characteristics for which substantial differences in percentages exist among the categories of those characteristics are included. For example, since about the same percentages of respondents with less education (less than high school) as those with more education prepare lamb at home at least weekly, education level is not listed as one of the distinguishing characteristic of the “typical” ethnic consumer for that behavior.

<sup>5</sup> The order and importance of the factors influencing lamb purchases by ethnic consumers was little affected by most demographic characteristics except race/ethnicity and religion.

### Prefer “Strong” or “Mild” Lamb

- *Prefer “Strong” lamb* – Middle Eastern, single, employed male under age 50 with a smaller household (3 or fewer members), at least some college who is Muslim, Christian, or Jewish.
- *Prefer “Mild” lamb* – Middle Eastern, married, unemployed female over age 50 with a larger household (4 or more members), and a high school education or less.

### Considers Price to be the Most Important Feature that Needs to Change About Lamb

Employed female age 50 or over from a small household (3 or fewer members) and a household income of \$60,000/year or more who is African American, Hispanic, or Western European and is Jewish or Christian.

### Consider the Listed Meat/Food to be a Substitute for Lamb<sup>6</sup>

- *Beef* - Married male under age 50 with a household income of more than \$60,000 of a Western European or Hispanic race/ethnicity and either a Jew or Christian;
- *Chicken* - Married female with a large household (more than 3 members) who is either a Muslim or a Jew;
- *Seafood* - Anyone of Asian race/ethnicity and Asian religion or African American or Hispanic race/ethnicity;
- *Goat* - Single, employed (part-time or at home) female with a smaller household (3 or fewer members) of Asian race/ethnicity and religion or Western European or African American race/ethnicity; and
- *Pork* – Older (over 50), high school or less education, unemployed male from a smaller household (3 or fewer members) of Asian race/ethnicity and religion or Hispanic Christian.

### Not Aware of Origin of their Lamb Purchases

Single Hispanic, African American, or Middle Eastern female, less than 50 years old and less educated (high school or less) from a small household (3 or fewer members) who is unemployed with lower household income (less than \$60,000/year).

### Purchases Only American Lamb

Married Middle Eastern, African American, or Muslim male less than 50 years old with less education (high school or less) but employed full-time with household income of at least \$60,000/year.

### Purchases Only Imported Lamb

Single East European, Jewish or Christian male 50 years of age or older who is better educated (at least some college) and with a household income of less than \$60,000/year.

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<sup>6</sup> The profiles here are of the “typical” ethnic lamb consumer most likely to consider the specific meat/food listed as a lamb substitute. So, for example, since “age” is not mentioned as component of the profile of those who consider chicken to be a substitute for lamb, that means that there is little difference in the percentages among age groups of those who consider chicken a substitute for lamb.

### Purchases Both American and Imported Lamb

West or East European or Asian over 50 years of age who is better educated (at least some college) from a smaller household (3 members or less) and employed with household income of at least \$60,000/year.

### Purchases the Three Most Popular Cuts of Lamb Among Ethnic Lamb Consumers

- *Rib/Loin Chops* – Married, female, age 50 or over with a smaller household (3 or fewer members) and household income of at least \$60,000/year of African American, Asian, East European, or Hispanic race/ethnicity and Asian-origin religion, Muslim, Christian, or no religion.
- *Leg/leg Roast* – Unemployed male with a larger household (4 or more members), and household income of at least \$60,000/year of Asian, Hispanic, East European, or Middle Eastern race/ethnicity and just about any religion.
- *Shoulder Chops* – Married, unemployed, male with household income of less than \$60,000/year of Middle Eastern or West European race/ethnicity and Muslim or Jewish.

### **Segmenting the Ethnic Lamb Market for Promotion Activities**

The division of a market into different groups of consumers with similar product needs and preferences is known as market segmentation. Particularly for small businesses and similar marketing groups, the possibility of successfully marketing to the whole population of potential customers is rather low. Rather than offer the same marketing mix (product, price, place (distribution), and promotion) to vastly different customers, market segmentation makes it possible for marketing groups to tailor the marketing mix for specific target markets, thus boosting profits by better satisfying differing customer needs.

In running its lamb promotion programs, the American Lamb Board faces two major market segments – lamb consumers and non-lamb consumers. Increasingly, however, the lamb consuming market itself is dividing into two additional main segments - ethnic lamb consumers and everyone else who consumes lamb (non-ethnic consumers). Of course, each of these segments of the lamb consuming population can be further segmented along various geographic, demographic, psychographic, and behavioral lines. ALB has focused a great deal of effort on segmenting the non-ethnic market and targeting its promotion programs to appropriate groups within that market segment. Given the widely different lamb preferences and lamb purchasing and preparation behaviors of ethnic and non-ethnic lamb consumers, however, promotion programs that may successfully enhance lamb consumption among the so-called traditional (non-ethnic) lamb consumers are not likely to be as successful when applied to the ethnic lamb consuming market segment. At the same time, as this study has demonstrated, ethnic lamb consumers themselves are highly diverse in their preferences and behavior resulting in many different sub-segments of that portion of the market as well.

The preceding section provided some important insights on the basic demographic and behavioral characteristics (or market segments) of the ethnic lamb consuming population in this country. Combining the demographic information with the behavioral information from this study along with information gleaned from conversations with several groups with long



experience and knowledge of ethnic lamb markets provides the basis for segmenting the ethnic market into various sub-groups of ethnic consumers for purposes of tailoring promotion programs. Given that Muslims are the primary driver in the recent and potential future growth of the ethnic lamb market and the importance of the price and quality of lamb relative to the objectives of ALB and in competition with imports, the study results suggest that the Muslim lamb market can be segmented into four key groups for promotion purposes: (1) quality-driven, (2) price-driven, (3) quality first but price is important, and (4) price first but quality is important (Figure 23).

The *quality-driven segment* of Muslim lamb consumers includes those of Middle Eastern races/ethnicities, including Lebanese, Syrians, Yemenis, Palestinians, Saudis, and others from that area of the world (upper left quadrant of Figure 23). These groups are motivated primarily by the freshness, cleanness, smell and other quality attributes of the lamb they buy. They are fiercely loyal to trusted lamb butchers and tend to buy lamb for regular daily/weekly consumption, religious observances, and special occasions regardless of price. They tend to be unwilling to substitute other meats for lamb and demand that all their lamb be Halal slaughtered. They prefer “mild” flavored lamb, demand baby lamb in preference to yearling lamb or mutton, and prefer American to imported lamb. They also are more likely to want to inspect the meat in the butcher’s cooler and prefer to purchase directly and custom slaughter their own lightweight lambs particularly for Eid-al-Adha. This segment of Muslim lamb buyers would not buy lamb sold from large chain grocery or discount stores even if it is marked “Halal” not only because the required trust in the store and its products is difficult to attain but also because pork is usually sold in the same meat cases. One butcher who was interviewed as part of the survey and caters primarily to Lebanese consumers related that a competitor once spread the rumor that he had some pork in his shop and his business dried up. He said that it took him six months to a year to regain the confidence of his customers and rebuild his business.

The *price-driven segment* of Muslim lamb consumers is composed primarily of North Africans and Muslims from other African countries, including Somalis, Ethiopians, Tunisians, Nigerians, Egyptians, and others (bottom left quadrant of Figure 23). These groups are motivated primarily by price in their lamb purchasing. They shop wherever they can get a low price and are more willing to substitute beef, chicken and other meats for lamb when its price is high. They tend to buy imported lamb and cheaper cuts of American lamb because they are largely unaware of and unconcerned about any quality differences. They prefer baby lamb but will substitute yearling lamb or mutton if the price is right. They are also less likely to be concerned with strict religious observances and more likely to assume that the lamb they buy is Halal but are also willing to buy non-Halal lamb on occasion if it is cheaper or more available. The price-driven segment is the appropriate target for lamb sold at Wal-Mart or Sam’s Club.

The *quality-first segment* consists primarily of East European Muslims, including Albanians, Uzbekistanis, and others from predominantly Muslim countries of the former Soviet Republics (the so-called ‘stans of Eastern Europe) (upper right quadrant of Figure 23). These groups prefer good quality lamb and exhibit buying behaviors similar to those in the *quality-driven* segment but will search for low prices and tend to be less loyal to local butcher shops. They also prefer young, lightweight, lean lambs like the quality-driven segment but will settle for something else if the lamb they want is not available or too highly priced. They are more likely to substitute

Figure 23: U.S. Muslim Lamb Market Segmentation



good quality, fresh Halal beef or chicken for lamb for weekly meals if the price is right but are less likely to do so for religious observances and special occasions. They may be susceptible to price promotions by large chain stores if they can be convinced that the lamb is fresh, clean, and good quality and if the pork is segmented from the other meats.

The *price-first segment* of Muslim consumers consists primarily of Asian Muslims, including Indians, Pakistanis, Bangladeshis, Malaysians, and others (bottom left quadrant of Figure 23). These groups are primarily price-driven but quality in terms of freshness and cleanness is still important to them. These groups search out low price sources of lamb and quickly switch from one supplier to another if the price is too high. They will buy either American or imported lamb depending on the price because they are largely unaware of the origin of the lamb they buy. Because quality is also important to them, they tend to stick with a perceived low-price supplier if they also perceive the quality to be acceptable even if they know that low-priced lamb is available elsewhere. They expect the supplier to be willing to negotiate on price and are more flexible on the requirement to consume only meat from Halal-slaughtered animals. This segment is also less traditional in its religious observances and, thus, tend to be more flexible on the age and size of the carcass. They buy mainly yearling lamb because of the price but prefer lean and not fatty meat. This group may also be a good target for large chain store sales of lamb if the stores will work to gain their trust and confidence by providing a consistent supply of low-priced and good quality Halal lamb.

Other groups of ethnic lamb consumers can also be segmented in this way. According to our results and our interviews with various groups, Jewish and Western European lamb consumers (Greeks, Italians, others) tend to be in the *quality-first* segment of the market. They demand good quality but will negotiate on price. They are less concerned with procuring lamb for religious observances than Muslims even though they often serve lamb on appropriate religious holidays and special occasions. They also tend to consume lamb at home less frequently and eat lamb away from home more frequently than Muslim lamb consumers.

Hispanic lamb consumers tend to be in the *price-driven* segment. The majority of traditional lamb-consuming Hispanics come from the regions in central Mexico near Mexico City where sheep production has survived since colonial times, including the regions of Hidalgo, Tlaxcala, Xochimilco, and Puebla. Outside these areas of Mexico, lamb is largely unknown and no more a part of the diets of the inhabitants than is the case for the majority of non-ethnic Americans. There are few regions of Latin America with as intensive a sheep production industry as that part of Mexico. Purchases of fresh lamb in that region of Mexico are uncommon (Losada et al., 1996). Young lambs are rarely slaughtered but are raised to maturity. The meat of the older animals (mutton) is primarily steam cooked (in *pencas de magüey* as discussed earlier) and sold as “barbacoa” (Mexican barbecue) primarily within those same regions. The cooking method tenderizes the mutton and gives it a distinctive flavor. Because the demand for “barbacoa” mutton exceeds its production in those regions, the deficit is supplied with meat from mature sheep imported from the United States. Because the majority of Hispanic lamb consumers in the U.S. are from those areas of Mexico, the Hispanic demand for lamb is focused on lower-priced and older cuts of lamb. Imported lamb is acceptable to this segment as long as it is price competitive.

Hispanic lamb consumers tend to be unconcerned with the origin of the lamb or its freshness, or quality and are more concerned with its cost and availability. Relatively few Latin American meat stores and grocery shops in the United States carry sufficient lamb to meet the needs of this group because they represent a small share of all Hispanic consumers. The greatest challenge for the researchers on this project was often finding places that sell lamb to Hispanic consumers in order to interview Hispanic lamb consumers. For example, none of the 30 or so stores in the Houston area of the largest food chain catering to Hispanics in Texas (Fiesta Mart) carried either fresh or frozen lamb in their meat counters. A butcher at one of the Houston stores explained that they used to carry some lamb but the demand was so meager that they continually lost money from disposing unsold lamb.

### **Implications for Lamb Promotions Targeted at Ethnic Lamb Consumers**

The primary implication of the results of this study for lamb promotion efforts is that tremendous opportunities exist within the ethnic population of the country to promote American lamb with expectations of substantial success. The quality-driven segment of ethnic consumers constitutes the primary target for ALB ethnic promotion. The quality-first segment could also be quite susceptible to promotions highlighting the freshness of American lamb and the caring treatment of their animals by American sheep farmers

However, despite the growth in their numbers, not all ethnic groups should be considered as primary targets for promotion. The price-driven segment of the market, North Africans and Hispanics, are the least likely to be persuaded by advertising that touts the quality of American lamb with such slogans as “10,000 miles fresher” or “American lamb from American land.” What they want is low-price lamb which is more a function of the operation of the markets than advertising campaigns at least over the long run. Some in the price-first segment might be persuaded by lamb promotions featuring the quality attributes of American lamb but these groups represent a relatively smaller share of the ethnic population so that that promotions targeted at them would not likely be highly cost-effective.

Many unsolicited comments from store owners and lamb buyers indicated that few ethnic lamb buyers were aware of any lamb promotion activities. Many in the *quality-driven* and the *quality-first* segments of the ethnic lamb market, as in all segments of the ethnic market, are completely unaware of the origin of the lamb they buy or any differentiating characteristics. Importantly, however, advertising alone will be insufficient to persuade large numbers of members of the *quality-driven* and *quality-first* segments to buy only American lamb unless efforts are also made to assure these individuals of the trust and confidence that they can place in American sheep producers and in the quality of their lamb. Several butchers indicated that a particularly effective way for the ALB to build this relationship with these segments of ethnic lamb consumers is to develop partnerships with local suppliers and increase the visibility of ALB in appropriate areas with educational literature, recipes, and other promotional materials in Arabic.

Many ethnic store owners and butchers interviewed as part of this project literally begged for information to assist them in educating their customers about lamb. They related that they spend substantial time in educating their customers on cuts, cooking methods, and types of lamb.

Many ethnic consumers reportedly tend to buy the same type and cuts of lamb and cook them in the same way all the time, usually as they learned in their home countries and cultures. By spending time with these customers, the ethnic store owners and butchers build trust and expand the volume and cuts of lamb they sell. However, education is time-consuming and assistance from the Lamb Board to educate their customers on uses and recipes for lamb, how lamb is raised in this country, what the difference is between imported and American lamb, and so on would be well received. Many requested that the interviewers convey to the Board their need for information in English but also in Arabic, if possible, to help them in their efforts to educate their lamb customers. This information could be provided in many forms from spots on local Arab-language TV and radio stations to printed materials. Such efforts could represent a highly cost-effective approach to targeting promotions to one of the fastest growing segments in our country, a group that tends also to be high per capita consumers of lamb.

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## APPENDIX I

### TEXAS A&M UNIVERSITY

#### INFORMATION SHEET FOR PROSPECTIVE SURVEY RESPONDENTS

##### **Ethnic Lamb Consumer Characteristics and Preferences Survey**

We are conducting a survey of individuals who buy lamb in this establishment. We hope that you will be willing to answer a few questions about yourself and your lamb buying and preparation preferences. We will NOT ask you your name, your address, telephone number, e-mail address or anything that could be used to identify you. We will NOT disclose your answers to this survey to anyone except our research team. Once we are done with the research project, we will destroy the survey used to record your answers. Your participation will help the U.S. lamb industry do a better job of providing you and others that enjoy eating lamb with higher quality and more available lamb products. In return for your participation, we would like to give you a free cut of lamb of your choice from this establishment.

##### Purpose of this Survey

The purpose of this study is to better understand the socio-demographic characteristics of ethnic consumers who purchase lamb, how, where, and why they buy lamb, the specific characteristics of lamb that they value, the factors that drive their purchasing behavior, and their comparative perceptions of the acceptability of domestically produced and imported lamb for their needs. You were selected to possibly participate because you selected some lamb for purchase from this establishment. This study is being conducted by professors of Agricultural Economics at Texas A&M University in College Station, Texas and is funded by the American Lamb Board.

##### What Do I Have to Do if I Choose to Participate?

If you agree to participate, you will be asked to answer a few questions about yourself to help us better understand who buys lamb and then a few questions about your lamb buying and preparation preferences. The survey should take no more than 15-20 minutes. The risks associated with this study are minimal and are no greater than risks ordinarily encountered in daily life.

##### What Are the Possible Benefits of this Study?

In appreciation of your willingness to answer the survey questions, we will give you a free gift of a lamb cut of your choice from this establishment. In addition, your answers will help the U.S. lamb industry understand their customers better and, therefore, provide them with lamb and lamb products of higher quality and better tailored to suit their needs.

##### Do I Have to Participate?

No. Your participation is completely voluntary. You may decide not to participate, to refuse to answer any question, or withdraw from the survey at any time without affecting your current or future relations with this establishment, the U.S. lamb industry, or Texas A&M University.

Will I be compensated?

If you participate in the survey, you will receive a free lamb cut of your choice from this establishment.

Who Will Know About My Participation in This Research Study?

This study is completely anonymous. We will not ask you to provide any information that could identify you. Also, the answers to each survey will be kept private. No identifiers linking you to this study will be included in any sort of report that might be published. Research records will be stored securely and only Dr. Gary W. Williams, Dr. Oral Capps, Jr. and their research team will have access to the records. As soon as the study is completed, the survey used to record your answers will be destroyed.

Whom Do I Contact with Questions About the Research?

If you have questions regarding this study, you may contact Dr. Gary W. Williams, Phone: 979-845-5911 and e-mail: gwwilliams@tamu.edu.

Whom Do I Contact about My Rights as a Research Participant?

This research study has been reviewed by the Human Subjects' Protection Program and/or the Institutional Review Board at Texas A&M University. For research-related problems or questions regarding your rights as a research participant, you can contact these offices at (979)458-4067 or irb@tamu.edu.



**APPENDIX II**  
**ETHNIC LAMB CONSUMER SURVEY**  
**Agribusiness, Food, and Consumer Economics Research Center**  
**Texas A&M University**  
**College Station, Texas**

**Surveyers:** \_\_\_\_\_

**City:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**Venue (grocery store, butcher shop, telephone, other):** \_\_\_\_\_

**I. Demographic Information**

1. Age (approximate if necessary)  
 <25     25-39     40-49     50-65     >65
2. Education  
 < High School     High School     Some College     College Degree
3. Gender  
 Male     Female
4. Marital Status  
 Married (spouse living)     Single (whether formerly married or not)
5. Number in household  
 1     2     3     4     5+
6. Employment (Choose only one)  
 Part-time (outside home)     Full-time (outside home)     Work at home (housewife/husband)     Unemployed (outside home)
7. Household Income  
 <20,000     20,000-39,999     40,000-59,999     60,000-79,999     80,000-99,999     >100,000
8. Race/Ethnicity. ("How would you classify yourself as to Race or Ethnicity?")  
(Note check only one of these boxes and then list the country that they or their recent ancestors immigrated from. Sometimes they won't know so just indicate NOT KNOWN in these cases.)
  - Caucasian/White/Anglo of Western European origins/ancestry (**Note: if this is the race/ethnicity, AND the religion is "Christian" or "None", then terminate interview.**)
  - Caucasian/White/Anglo of Eastern European origins/ancestry (including Russia, Greece, Croatia, Albania, Tajikistan, other former Soviet Socialist Reps) Country: \_\_\_\_\_
  - Middle Eastern (Middle East/Turkey/North Africa) Country: \_\_\_\_\_
  - Hispanic/Latino/Chicano (Cuban, Mexican, Puerto Rican, South/ Central American, other Spanish culture or origin) Country: \_\_\_\_\_
  - Black/African American (origins in any of black racial groups of Africa) Country: \_\_\_\_\_
  - Asia (origins in Far East, Southeast Asia, or the Indian subcontinent including Bangladesh, Burma, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Mongolia, Nepal, Pakistan, the Philippine Islands, Singapore, Taiwan, Thailand, Vietnam) Country: \_\_\_\_\_
  - Other  
Specify: \_\_\_\_\_

9. Religion

- Christian (Protestant/Catholic/Orthodox)
  - Muslim/Islamic/Baha'i
  - Jewish/Judaism
  - Asian origin (Buddhism, Shinto, Hinduism, Confucianism, Sikhism, Taoism, etc.)
  - None
  - Other
- Specify: \_\_\_\_\_

**II. Lamb Purchasing/Preparation Behavior**

1. How often do you prepare lamb at home?

- Once a week
- More than once a week
- Once a month
- Once every few months
- Once a year
- Never

2. How often do you eat lamb at a restaurant?

- Once a week
- More than once a week
- Once a month
- Once every few months
- Once a year
- Never

3. How often do you eat lamb at the home of a friend or family member?

- Once a week
- More than once a week
- Once a month
- Once every few months
- Once a year
- Never

4. Do you ever prepare lamb (or is lamb ever prepared) for a religious holiday or other special occasion?

- |   |   |
|---|---|
| <input type="checkbox"/> Beginning of Ramadan | <input type="checkbox"/> Christmas                      |
| <input type="checkbox"/> Eid-al-Fitr          | <input type="checkbox"/> Birthdays                      |
| <input type="checkbox"/> Eid-al-Adha          | <input type="checkbox"/> Weddings                       |
| <input type="checkbox"/> Passover             | <input type="checkbox"/> Anniversaries                  |
| <input type="checkbox"/> Easter               | <input type="checkbox"/> No, never on special occasions |
| <input type="checkbox"/> Other                |   |

Specify: \_\_\_\_\_

5. Why do you buy lamb here at (venue) ?

### III. Lamb Consumption/Preparation Preferences

1. Which of the following factors are the most important in influencing your purchases of lamb cuts?

(Check all that apply)

- The price of lamb
- The prices of other meats (like chicken, pork, and beef)
- The nutritional characteristics of lamb
- The digestibility of lamb
- The availability of lamb or lamb cuts desired
- The serving size
- Tradition (“Our family has always eaten lamb.”)
- Special occasions
- The flavor of lamb. If this factor is deemed important, then ask:  
“What is it about the flavor that is important to you?” \_\_\_\_\_

\_\_\_\_\_

- Other  
Specify: \_\_\_\_\_

2. Which of the previous factors is the MOST important in influencing your purchases of lamb cuts? Why?

Factor: \_\_\_\_\_

Why?

3. When you hear the terms “strong” flavored and “mild” flavored lamb, what do they mean to you?

Strong:

Mild:

4. Do you prefer strong or mild flavored lamb? Why?

Strong or Mild: \_\_\_\_\_

Why?

5. What would have to change (if anything) about the lamb that is available to you before you would be willing to buy more lamb?

6. If lamb is priced too high or not available when you go to buy it, what meats or foods might you buy instead?  
(Let respondent answer unaided and mark the appropriate box.)

- Beef     Pork     Chicken     Veal     Seafood     Goat

Other. Specify: \_\_\_\_\_  
\_\_\_\_\_

7. Do you purchase American lamb or imported lamb?

- Only American lamb (continue to Q #8 and then skip to Q #10)     Only imported lamb (skip to Q #9)     Both     Don't know/don't care (skip to Q #10)

8. When you buy American lamb, what are the reasons?

9. When you buy imported lamb, what are the reasons?

10. On a scale of 1 to 10, how much do you agree with the following statements where 1 is strongly disagree and 10 is strongly agree?

- a. American lamb is always better quality than imported lamb \_\_\_\_\_
- b. American lamb is always more available than imported lamb \_\_\_\_\_
- c. American lamb is always lower priced than imported lamb \_\_\_\_\_
- d. American lamb has better flavor than imported lamb \_\_\_\_\_

11. What cuts of lamb do you normally purchase?

- |   |  |
|---|--|
| <input type="checkbox"/> Boneless shoulder roast      | <input type="checkbox"/> Leg roast     |
| <input type="checkbox"/> Shoulder chops (blade & arm) | <input type="checkbox"/> Shanks        |
| <input type="checkbox"/> Rib roast/rack               | <input type="checkbox"/> Spareribs     |
| <input type="checkbox"/> Rib or loin chops            | <input type="checkbox"/> Lamb for stew |
| <input type="checkbox"/> Loin roast                   | <input type="checkbox"/> Ground lamb   |

Other  
Specify: \_\_\_\_\_

12. How do you usually prepare the lamb you purchase?

13. What problems do you encounter in purchasing or preparing lamb?