Marketing Slaughter Goats and Goat Meat

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Unit Objective

After completion of this module of instruction the producer should be able to point out the benefits of goat meat and describe the types of goats usually wanted for different markets. The producer should be able to evaluate the different marketing channels available in their region for marketing goats, and be able to calculate probable expenses and income from these different markets. The producer should be able to evaluate goats for market readiness using tools such as the USDA Live Goat Selection Criteria. The producer should be able to distinguish the advantages and disadvantages of selling suckling kids, weaned market kids, goat carcasses, or retail meats. The producer should be able to complete all assignment with 100% accuracy and score a minimum of 85% on the module test.

Specific Objectives

After completion of this instructional module the producer should be able to:

1. Identify the number one consumed meat in the world.
2. Identify the desirable characteristics of goat meat.
3. Identify what country exports the more goat meat to the United States.
4. Identify the number of goats killed in the USDA slaughter facilities in 2003 and state if that number is on the increase, decrease, or stable.
5. Define the meaning of the term feral goat.
6. Identify the population group in the United States that consumes the majority of the goat meat.
7. Distinguish between Halal and Kosher kill.
8. Match farm fresh product terms with the correct definition.
9. Match types of market goat terms with the correct definition.
10. Distinguish between suckling and market kids.
11. Match terms related to holiday marketing of goats to the correct definition.
12. Identify the marketing channels for meat goats.
13. Distinguish between federal, state and custom kill slaughter facilities.
14. State the recommendations a producer should follow for on the farm slaughtering.
15. State the purpose and advantage of marketing pooling.
16. Match slaughter terms with the correct definition.
17. State acceptable birth weight ranges for different goat breeds.
18. State acceptable weight gains for baby goats from kidding to weaning at 3 months of age.
19. State acceptable weight gains for weaned goats to marketing weights.
20. Identify the number of days in a goat’s gestation period.
21. Match the USDA Live Goat Selection Grades to the correct definition.
22. State the meaning of market readiness.
23. State factors/input items that affect the marketing bill.
24. Identify acceptable ranges for carcass percentages.
25. Calculate dressing percentages.
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Introduction

Goat meat became the primary red meat consumed by the majority of the world population after the domestication of livestock. The goat’s versatile eating habits and many products (milk, pelts, manure, fiber, and meat) made it a useful animal for diverse populations and regions. Its small size and temperament made it easy for any family member to handle. Today, many subsistence farmers still use goats as a low risk savings account. Goats cost far less than larger ruminants and multiply quickly. In a drought or other catastrophe, extra goats can be sold as needed, at least part of the herd often survives, and herd numbers rapidly recover.

Goat meat is the authentic meat for many ethnic dishes. Meat from young goats is tender and flavorful. Older goat, particularly male goat, has a coarser grain but is far less pungent than mutton, with a flavor similar to beef. Goat meat is a healthy meat choice. It is lean and rarely marbled (marbling is when fat is deposited as flecks within the muscle). Instead, goat fat is deposited around the internal organs to provide energy and protection against starvation. During meat processing, this organ-associated (visceral) fat is removed with the internal organs. Some studies indicate that goat fat has a lower percentage of the “bad” saturated fats than other red meats. Like other lean meat cuts, most cuts of goat are traditionally cooked at low heat or with moisture or marinating.

Goat meat consumption is on the upswing in the United States. Today’s immigrants often bring with them a tradition of eating goat meat. Goat meat may be an important part of their holiday celebrations. Its fine flavor and low fat content make it attractive to health conscious consumers. The slaughter numbers at USDA inspected facilities increased more than threefold from 208,000 goats in 1991 to 647,000 goats in 2003. Imports from our largest importer, Australia, increased from approximately 3 million pounds in 1990 to 17 million pounds in 2003. Assuming a 33 lb carcass (the average carcass quoted by most wholesaler), this equals approximately 515,000 more goats.

Increased consumption is driven by 1) the popularity of goat meat with the diverse ethnic groups that immigrate yearly to the US and 2) burgeoning culinary interest in authentic ethnic foods and lean red meats. According to the 2000 US Census, approximately 10% of the US population is foreign born with about 51% of first generation immigrants coming from Latin America and much of the remainder identifying themselves as Muslim. Most immigrants settle initially in metropolitan areas making it relatively easy to concentrate marketing in these areas. The Northeast US accounted for only 4.5% of the total US goat population in the 2002 Agricultural Census. However, due to the high concentration of immigrants in Northeast cities, the same region accounted for 48% of the goats slaughtered in USDA inspected slaughterhouses. The low income base of many newly immigrated families, particularly refugees, may suggest that they will be attracted to cull animals and to frozen, imported goat meat. However, as families become established in the US, they become more upwardly mobile and financially secure. Even people on tight budgets opt to splurge on fresh, local goat for weddings, funerals, and holidays.

Australia and New Zealand (NZ) supply a major portion of the imported goat meat sold commercially in the US. Most of the goat meat imported from Australia is harvested from extensively managed “feral” (semi wild) goats and slaughtered at modern, centralized in-country
slaughterhouses specializing in lamb exportation. Carcasses or “six packs” (boxed as 6 primal cuts) are frozen and transported by ship to the US. The quality is inconsistent and profit is highly dependant on the exchange rate between US and the Australian/NZ currency, decreasing when the US dollar weakens. For example, the current (2005) low value of the dollar is less advantageous to Australia exports and helps to encourage our domestic production. A benefit of imported, low value, year round product is that it keeps families in the habit of consuming goat meat. However, a growing portion of Australian and NZ goat meat is available as flown-in Cryovaxed fresh carcass and retail cuts from export slaughterhouses approved by the USDA. United States goat farmers need to increase their market expertise, infrastructure, and product availability to compete with fresh imported product.

In addition to production costs there are also costs associated with loss of markets. If you are selling fat goat kids to a local slaughter house and one of them has a big CL abscess then you have probably lost that market. If you are selling breeding animals locally to farmers and word gets out that after buying one of your does several farms experienced abortion storms then you have probably lost that market. If you are selling nationally or internationally and one of your does tests positive for any of the federally or internationally regulated diseases (e.g., Brucella, Tuberculosis) you have just been removed from that market.

Knowing the Market

The difference among Halal, Kosher, and other cultural group slaughter requirements

A first step in knowing the market is to understand the strict meat handling requirements of some cultures. Muslim consumers require their meats to be “Halal” or “lawful” to their religious scriptures. For many this means it should be slaughtered using “zabiha” methods. Halal requires that the animal must be humanely killed by an adult Muslim. However, some Muslims will accept Kosher killed meats (especially if halal is unavailable) and some will accept meat killed by a Christian slaughterman.

During a zabiha kill, the animal faces Mecca and the Takbir (a blessing invoking the name of Allah, the Muslim word for “G-d”) is pronounced while the animal is killed without stunning by holding it’s head back and using a quick, single continuous cut across the throat just below the jawbone to sever the windpipe, esophagus, arteries and veins forward of the neck bone. Ideally, the knife blade should be extremely sharp and twice as long as the width of the animal’s neck. A hand guard is permitted for safety. Muslims also view any goat that has consumed any pork (including lard or bloodmeal) products to be unclean. Other feeds that might be categorized as “filth” may also lead to rejection of the animal. A 40 day period prior to slaughter of “clean” feed will generally suffice.

Kosher kill requires that the animal be killed without stunning by a specially trained religious Orthodox Jew, called a “shochet,” using a properly sharpened special knife with no hand guard.
The shochet also inspects the carcass and organs for defects. If the meat is to be certified as “glatt” Kosher, a stricter Kosher standard, the carcass from a small animal such as a goat must have no lung adhesions. The sciatic nerve and various veins, fats and blood are prohibited for Kosher consumption and must be removed. In most cases, rather than going through the difficult procedure of removing the sciatic nerve in the hindquarter, only the forequarter is marketed as Kosher and the hindquarter is sold through other marketing channels.

Federally inspected slaughterhouses need to apply for a “religious exemption” from stunning to conduct Halal and Kosher slaughter. The animal should either be killed on the ground (allowable only for non-inspected slaughter), straddled, or walked onto a double rail for a religious kill because it is inhumane to hoist and shackled the animal by its hind legs while still alive. Although there are national certification programs for Kosher and Halal processed foods, there is no national mandatory labeling and certification for Halal or Kosher meats. For the most part, it is your responsibility to insure that your meat meets your customers’ definitions of Halal or Kosher.

Certain African, Caribbean, and Oriental cultures prefer carcasses to be scalded or singed as part of the processing. A federally inspected slaughterhouse needs to include this step and describe how they will maintain food safety in this process in the mandatory hazard analysis portion of their HACCP (Hazard Analysis Critical Control Point) Plan.

**Goat marketing terms**

There is a growing market in the US for the consumption of farm fresh product. Some consumers request organic meats while others ask for grass fed meat. Here are some legal descriptions of these terms.

**“Organically certified”** meats are from livestock that have been raised in compliance with the National Organic Program’s standards ([see the module on Organic Meat Goat Production](#)). Their production must be certified by an accredited state or private certifying agency. Strict guidelines must be met. For example, the use of dewormers and antibiotics is forbidden not only for the market goat itself but also for its dam during the last third of pregnancy (gestation) and lactation. Sick animals are to be treated if necessary but can no longer be marketed as organic. All feed and bedding must usually be obtained from certified organic sources.

**“Natural”** is a food label that does not refer to how the animal was raised but rather to how it was processed. Natural products can contain no artificial ingredients, coloring agents or chemical preservatives and must be minimally processed. Meat can be ground, smoked, roasted, dried, or frozen as long as these procedures do not fundamentally change the raw product.

**“Grass fed”** is not an official marketing claim. The USDA Agricultural Marketing Service (AMS) has attempted for several years to come up with a standard for this marketing claim. Raising livestock on a forage diet with little or no grain supplementation may increase the amount of beneficial fatty acids (Omega 3 and CLs) in their meat. Originally, AMS suggested
that livestock whose primary energy source throughout their lifecycle consisted of at least 80% grass, green or range pasture, or forage could be labeled grass fed. Some producer associations have argued that this level should be as high as 95%.

Meat that is certified as “humanely raised and handled” is from farms that have enrolled in a private certification program such as that of the Humane Farm Animal Care (www.certifiedhumane.com), a consumer certification and labeling program based on standards established by a scientific animal welfare committee. They have no standards for goats but their sheep standards require that sheep have access to artificial or natural shade in all pastures at all time. This could be problematic for farms that move their goats rapidly through intensive pasture paddocks and also for farms that are keeping their worm loads down by discouraging goats from congregating in one portion of the pasture as happens when shade is provided.

Pasture raised, sustainably raised, and locally grown are very loose claim terms. For example, farmer markets handling only “local” product may require that the product be raised within 30 miles while supermarkets may consider product to be local if it can be transported to the store within a set number of hours.

Types of Market Goats

As well as knowing some of the different certification programs for describing meat, it is important to know the terms for describing various types of market goats.

*Newborn kids*

Many goat dairies market excess kids shortly after birth. Markets may refer to them as “shoebox” kids because the ease of carrying them makes them popular as religious sacrifices in some cultures after the birth of a child. Kids from miniature breeds are older at the same size and harder for this purpose. Kids receive colostrum the first day or two after birth and are then put on milk or milk replacer. Long hauls are hard on them and they are best delivered to nearby markets. As well as being marketed for religious sacrifice they are often purchased as pets or by feeder operations to hand raise on milk replacer.

*Suckling kids*

Terms for suckling kids include hothouse kids, Easter kids, cabrito (Mexico), capretto (Italy) and katsikia (Greece). They are unweaned kids ranging from about 4 to 12 weeks old. A good suckling kid is growthy and plump, looking like it has consumed lots of milk and little roughage. Dairy replacement kids or orphan kids raised on a minimum of milk and showing noticeable rumen development are not ideal. The meat should be relatively light in color.
The cabrito and capretto markets ideally prefer kids 18 – 25 lbs live weight while Greek markets prefer kids 30 - 45 lbs. However, the hides-off rule (a federal requirement that carcasses must have the hide removed for retail sales) has increased the sizes required by many retail meat markets. Kids weighing 20 lbs or less dry out too fast when marketed with their hide off. Many suckling kids easily reach 45- 55 lbs by 12 weeks of age. Consumers from countries where goats are smaller may need to be reassured of their tenderness and youth. However, because customers are resistant to purchasing split carcasses, the high cost per lb live weight of suckling kids may work against marketing larger sucklings.

**Market kids**

Market kids are weaned kids with no adult teeth (all milk teeth). “Feeder” kids are very lean market kids in demand for feedlots. “Muslim kids” is a generic term for moderately lean market kids and refers to the preference of many ethnic customers for goats with no surplus fat. Heavier kids may be called “restaurant” or “finished” kids. “Yearlings” are young goats between one and two years old as judged by their teeth (one set of adult teeth generally indicated that a goat is between 1 and 2 years old).

**Wethers**

Wethers are castrated male goats. Young castrated goats are popular with some cultures (Nepalese Hindus, etc.) while other cultures (Jamaican, etc.) prefer the manly flavor of intact
(uncastrated) “ramgoats” or “billies.” However, it is important to be careful about generalizing about cultural preferences. Often people originating from the same country or religion have very different preferences. It is important to know your market. Adult wethers are in demand for medical research and antibody production.

**Cull Does**

Young cull does are sometimes called “Philippino” goats. A plump young doe is desired but buyers are leery of any pouchiness hinting at possible pregnancy. Older cull does and bucks may be called “curry” or “African” goats because of their popularity for slow cooking into a stew or curry to feed a plenitude of people. The method of cooking them counteracts the toughness of older meat. However, excessively fat or boney goats are undesired. These “billies and “nannies” are also in demand to fill prison contracts. Keep in mind that well grown uncastrated market kids will sometimes be classified as smaller billies on market reports.

**Market likes and dislikes**

Some cultures have specific likes and dislikes when purchasing live slaughter goats. For examples, immigrants from some countries (Korea, etc.) prefer dark colored or black goats. These goats may have a medicinal or religious significance in their home country or they may find the appearance of a darker pigmented skin preferable on a scalded or singed carcass.

Buyers tend to shy away from Angora goats, pygmy goats and completely white goats. However, a meaty goat often overcomes these reservations. The goat meat market was initially worried about the large amount of white on Boer goats and potential for fat. Now most markets prefer goats showing Boer breeding. Goats with flashy markings or impressive horn sets may fetch extra money for sale to live animal markets. However, when making generalizations about what sort of goat a culture likes, keep in mind that any “culture” is made up of lots of subcultures and ultimately many diverse individuals and preferences.

**Holiday Demand**

Goat meat demand increases during specific holidays. It is important to know these holidays and the type of goat often in demand. Websites such as [www.sheepgoatmarketing.info](http://www.sheepgoatmarketing.info) and [www.interfaithcalendar.org](http://www.interfaithcalendar.org) can help you learn holiday dates. Muslim holidays are based on the lunar calendar which is 11 days shorter than the solar calendar. This means the dates for these holidays move forward about 10 to 11 days each year depending on when the new moon is actually sighted.
**Easter**

**Western or Roman Easter** - The traditional Italian market is for a suckling kid weighing 18 – 35 lbs live. However, there is a growing demand for larger suckling kids, market kids, and curry goats by various ethnic families who also celebrate western Easter.

**Greek or Orthodox Easter** - The traditional market is again for suckling kids but a slightly larger weight range from 25 – 50 lbs live weight is usually desired.

**Ramadan**

Ramadan is a month long Muslim holiday to celebrate Muhammad receiving his divine revelation. Families tend to get together for celebrations at the beginning and end of the month of Ramadan and for festive meals each evening of the month. During Ramadan, Muslims cannot eat from sunrise until sunset of each day. The demand is for market kids with all their milk teeth weighing anywhere from 45 to 110 lbs live. The most popular weights are about 55 to 75 lbs live.

**Festival of the Sacrifice or Id al Adha**

The traditional goat for this Muslim holiday commemorating Abraham’s willingness to sacrifice his son Ishmael in obedience to Allah is a yearling or “one tooth” goat. “One tooth” refers to the fact that yearling goats have one set of adult teeth. However, large market kids and older goats are also used. The goat is larger than goats used at Ramadan because traditionally some of the meat is to be shared with the customer’s extended family and some is to be distributed to the needy. Because it symbolizes a family’s religious commitment, the animal must be unblemished. For some Muslims this means it should be healthy with no broken horns, open wounds, or lameness. For others, it should not be castrated nor have even a torn ear. Some families consider a goat with a small sac that has been castrated with a burdizzo, *unblemished*, and a “sac-less” goat castrated with a band, *blemished*. Others have no concern about castration if the goat is fully healed.

**Cinco de Mayo and other Hispanic holidays**

Some Mexican American families desire a small cabrito kid to celebrate Mexico’s independence from Spain. Others prefer a large market kid or yearling barbecued whole over a pit. Seco de Chivo or goat stew is a popular dish for other Latin American cultures for holidays such as Christmas.
**Christmas and New Year**

Christmas and New Year are holidays when suckling kids are popular. However, does must be bred when the days are long (outside the normal breeding season) to produce Christmas sucklings. The scarcity of young kids may result in excellent prices and more relaxed weight restrictions. The demand for “curry” goats and market kids also increases during this time as a wide variety of families get time off together.

**Dassai**

Dassai is a Hindu holiday celebrating the goddess Durga. Female goats are usually not acceptable for this holiday. There is often a preference for market wether kids. However, the size of the carcass varies depending on how many people are being fed.

**Caribbean holidays**

Several independence days and “Carifests” occur in the fall. The traditional dish is “curried goat” from intact market kids or bucks accompanied by a goat soup using the rest of the goat carcass. Many people hold the opinion that the smell of the male goat improves the flavor and potency of the soup. However, some families prefer castrated market kids or females.

**Marketing Channels**

It is important to understand marketing channels when trying to determine where in the supply chain to introduce your product. A typical supply chain would have a farmer selling his goats at a local auction where a livestock dealer picks them up to sell to a distributor either directly or through a regional auction. The distributor could be a meat packer (slaughterhouse that operates as a distributor) or a wholesale business that arranges to have the animals processed. The distributor then sells the carcasses or meat cuts to retailers who in turn serve the direct consumer. There are opportunities for shortcuts along this chain. The closer the market channel you sell to is to the actual consumer, the more responsibility you generally take on.

**Live market auctions**

Live market auctions are an easy way to market live goats. You expend almost no effort to find a buyer and you are guaranteed timely payment by a bonded entity. Of course, you have no control over the price you may receive. It may be a good idea to seek out larger regional sales or graded holiday sales where more buyers are likely to compete for your animals. Look over any past market reports for that particular auction. Are goats sold by the lb or, less professionally, by the head? Sometimes prices are reported for an “estimated weight range” because the goats are really being sold by the head. Make a commitment to call the sale barn manager in advance to get their advice on best date to come and gauge their enthusiasm for your product. If at all possible, use the auction to more directly connect yourself to buyers. This means staying for the bidding and introducing yourself to buyers. Hand out your business card. Let them know that you have more goats where these came from. Mention live weight payment.
Livestock dealers, brokers, or meat packers

Another easy way to market goats is through livestock dealers, brokers or meat packers. Livestock dealers may come straight to your farm. Brokers are similar to dealers but sell your animal on a commission. Many producer cooperatives essentially act as brokers. Meat packers operate slaughterhouses where they process animals to meet the demands of their wholesale and retail customers. Often you will be expected to deliver the goats to their slaughterhouse unless they contact you through a dealer or broker.

To sell to these buyers, you need to be able to accurately describe your animals. This means having a scale on farm and using it. You do not need to be an expert grader but you need to be able to provide accurate information about the age, weight, breed, and number of animals you have for sale. You need to know what your animals are worth, what current market prices are like, and how to cordially defend your asking prices. If a buyer is picking up on farm, keep in mind that 1) he or she is taking on your transport expenses, and 2) your on-farm weights will not reflect any transport shrinkage (live weight losses during transport). If your payment is based on on-farm weight, these two factors are advantageous to you.

Unless the buyer is paying you cash during the transaction it is very important that you establish a paper trail. You need to know the Packers & Stockyards Act. Check with your regional P & S representative or your state’s Department of Agriculture to see whether the buyer is bonded or licensed with an official agency. In order to qualify for P & S protection, do not extend credit, do not use threats or intimidation to negotiate price, and do get an invoice or other proof that the animals were delivered. The invoice should include seller’s and buyer’s names, number or lbs. of animals delivered, and sale price per unit. It is good to have the buyer sign it. However, a buyer signature is not required for P & S to file a complaint for you.

Direct sale to wholesale and retail businesses

Goat farmers can also bypass dealers and packers and instead sell animals directly to wholesale and retail businesses. You’ll receive a higher price, but take on much more responsibility. Often you’ll need to make all slaughter, processing, and transport arrangements and pay these expenses up front. The price you negotiate will need to take these into consideration. You’ll also need to accurately
predict the carcass yield of your live goats as these buyers will be requesting specific sized carcasses.

Success in this market will depend on you having a dependable affordable USDA slaughter facility to work with and an economical, legal, and reliable way to get the meat to the buyer. You’ll need to judge how trustworthy your buyer is and even under good conditions there will be a time lapse between delivery and payment. Buyers can be sought through the marketing directory at www.sheepgoatmarketing.info, by obtaining lists of USDA Meat Inspection Establishments, by requesting lists of licensed packers from P & S, or by searching on-line yellow page services for key words such as “Halal Meat Market.”

**Live animal markets**

In some regions near high concentrations of ethnic populations, there are live animal markets. These markets are not to be confused with auctions. Rather, these are retail businesses where direct consumers can go and view penned animals, make their pick, and have the animal slaughtered at an on-site custom slaughterhouse. Because they take ownership of the animal prior to slaughter, the animal does not have to be slaughtered in a USDA federally inspected plant. Instead the animals are slaughtered under the “custom exemption” in the federal code which provides that the owner of an animal does not have to have the carcass federally inspected if the meat is going directly back to the owner’s household for consumption. The meat is stamped “not for resale” and then bagged for the customer to take home. Live animal markets usually buy from dealers or order buyers at regional auctions. However, sometimes they buy direct from producers. Some goat farms with on-farm slaughterhouses have become rural versions of live animal markets.

**Direct sale of USDA-inspected meat**

You can also sell USDA-inspected meat directly to restaurants, retail meat shops, and individuals. This requires expending time soliciting clients, receiving orders, arranging shipment, and staying in regular contact. Yellow Page searches can help locate restaurants and retail meat markets. Many restaurants are transitory, as are chefs. Chefs generally determine the menu and suppliers. Thus, if a chef leaves a restaurant, you’ll usually need to renegotiate with the new chef. Restaurants may only want specific cuts in which case you’ll need to come up with a market for the rest of the trim.

The goats must be butchered and inspected at a USDA slaughterhouse unless you live in a state such as Vermont or Maine where there are state inspected slaughterhouses with carcass inspections done by state employees. State inspected carcasses can only be sold within state. The meat must be transported at a temperature below 40°F and stored separately from non-inspected
meat. For example, in an upright freezer USDA meat needs to be stored in shelves above any non-inspected meat. In some states there is talk of requiring that the meat be stored at licensed retail facilities.

The meat must be processed at either a USDA plant or a state certified kitchen. You’ll need to accurately predict what size and weight retail cuts your carcasses will yield. A reliable slaughterhouse, processor, and distributor are paramount. You’ll need liability insurance to cover any problems with the meat you deliver. To keep most of these markets, you’ll need to provide meat on a regular basis. Unless you have a large herd and can stagger your breedings, you may need to become a dealer and purchase goats from other producers. Another strategy for selling direct to retailers is to raise a diverse range of products, for example, goat meat, farm fresh eggs, homegrown vegetables and, thus, save time by marketing a multitude of products to the same customer.

**Direct meat animal marketing to consumers**

Another way many goat producers market their animals is directly to the end consumer either through 1) on-farm sales where customers come to your farm and pick out a goat, or 2) the “freezer trade” where a customer orders a goat delivered to a slaughterhouse for them for slaughter and processing into retail cuts. These channels work well for farm families who enjoy dealing with numerous customers one-on-one and meeting new cultures. Initially you’ll need to advertise and actively seek clientele. It is a good idea to have your slaughter goats separated from your breeding stock kids or to have an easy way for customers to identify which is which. Posting prices and sticking with them will help cut down on time spent attempting to bargain. You need to decide if you are going to be involved in the slaughter process at all or if customers are simply going to pick up their goat and be on their way.

If you plan to be involved in the slaughter process, check with your state to find out the state regulations on 1) allowing customers to slaughter on-farm, 2) transporting purchased goats to a custom slaughterhouse for a customer, or 3) whether purchased goats are only supposed to be slaughtered at a federally inspected slaughterhouse. Some states have stricter interpretations of the “custom exemption” than the federal code and require that only the person “who has raised the animal” qualify as the owner. Some states allow a customer who has purchased a goat from a farm to slaughter the goat at their own premises but not on the goat farm. If you have questions about state restrictions ask for a printed copy of the regulation and a layperson’s interpretation of it. It is also a good idea to find out how other lamb and goat producers in your area handle these transactions.

If you allow on-farm slaughter, keep in mind that you are not supposed to be doing the slaughtering for the customer. You are simply permitting the new owner to slaughter it on your land. You should have a tree or beam to hang carcasses, potable water, and a sanitary, legal way to dispose of any offal that does not pollute water sources or conflict with local ordinances. In states where composting of offal is legal, many farms opt to compost the offal in a high carbon
material such as wood chips. Other options are to provide a pre-dug trench or pay a rendering company to pick up offal. Farm liability insurance is a must.

If freezer trade customers are getting the goat slaughtered at a custom slaughterhouse keep in mind that theoretically they have already purchased the animal from you at a live weight price plus processing costs. It is important that they understand how much meat they can expect and how the retail cuts will be distributed. Forms that allow them to fill out how they want the meat processed can help. Ethnic customers using the goat for curry dishes may want the carcass processed into 1½ inch chunks of meat and bone on a band saw, while other customers may want roasts, chops, steaks with the remainder deboned for either stew or ground meat. If you are selling the meat rather than the slaughter goat (and this includes all sales at farmers’ markets or over the internet), the meat carcass must be inspected at a USDA-inspected slaughterhouse and meat handled under the same regulations as if you were selling it to a retail business. You’ll need to investigate the cheapest and safest ways to handle credit cards, shipping materials and containers, and shipping costs if you offer internet or mail order sales.

**Market pooling**

A big limitation for many farmers is having too few animals at any one time to negotiate directly with a volume buyer. One way to combat this is through market pooling. A group of producers pools their animals together to sell to a buyer. One or two people act as market coordinators and negotiate price with the buyer, pass on information about the type and quality of market animal required, determine a central pick-up point, and arrange to have a scale on-site. Farmer responsibilities will vary depending on the type of buyer your group targets. For example, if you group together to sell to a retail store, you’ll need to pay slaughter costs upfront. The pool will need to determine whether they can hire out trucking themselves if the buyer cannot provide it.

Marketing pools can be successful if all producers who commit to the pool show up, if animal quality, type and weight is as originally arranged with the buyer, and if the pool does not overextend itself and try to provide more product or more deliveries than they have market ready animals for. The producers who act as market coordinators do the most work and need to be reimbursed. If they act as graders, the role can be especially stressful because they may need to reject animals belonging to their coproducers and friends. Estimates of dressing percentages and transportation shrinkage get more difficult as animals raised under a multitude of management conditions are combined.

**Cooperatives**

Formal cooperatives are another way that producers can work together to attract volume buyers. A small core of dedicated producers and staff that communicate well together is needed to get a cooperative established. Substantial capital or livestock investment is needed to insure loyalty to the cooperative and to provide the business with enough operating capital to invest in reliable processing and trucking, and to effectively seek out buyers. Commissions charged by the
cooperative to producers also need to realistically reflect the business costs. Well-defined quality assurance programs with easily verified criteria are essential. If marketing to restaurants that are committed to buying local product, information about the farm of origin as well as about the cooperative is often welcomed.

**Slaughter Terms**

Regardless of what marketing channel a farm decides to work with, it behooves a goat producer to learn some basic slaughter terminology and how to calculate some of the commonly used measurements. Several factors affect these measurements.

**Hanging carcass weight**

Hanging carcass weight is the weight of a dressed carcass as it hangs from the rail. Different buyers will include different parts of the goat in this weight so it is a good idea to ask them for a detailed description. Often it is the weight of the carcass after the offal, internal organs, hide, head and lower shank bones have been removed. A hide off/head on carcass has the offal, organs, and hide removed but not the head while “organs hanging” means that the kidneys, liver and heart and any fat surrounding them are included in the weight. “Hot carcass weight” is the weight immediately after slaughter while “cold carcass weight” will include weight loss after chilling (cooler shrinkage).

**Dressing percentage (DP)**

Dressing percentage (DP) = (hot carcass weight/live weight) * 100, i.e., it’s a measurement of the weight of the carcass compared to the live weight of the animal. For example, if an animal weighs 80 lbs live and dresses out with a 40 lb hanging carcass, the DP is 50%. Dressing percentages is affected by what parts of the goat are being included in the carcass weight. Dressing percentages range from about 45% – 55% for market kids with the hide off/head on, while dressing percentages for nice suckling kid carcasses with hide off/ head on and organs hanging often range from 52% – 62%. Two major factors influencing DP are gut fill and carcass fat. If an animal is full of feed when its live weight is taken it will have a full gut and a lower DP than if the same animal is taken off feed for a short time prior to weighing. Suckling kids and plump kids tend to have higher DP’s than weaned kids or lean kids.

**Shrinkage or shrink**

Shrinkage or shrink refers to the weight loss that occurs in live weight from the time the animal is gathered for transport until it is slaughtered. Goats coming off lush pastures will show live weight losses shortly after being taken off feed because the feed passes through them faster than dried forages and grains do. If animals are deprived of feed for 6 or more hours not only live weight but carcass weight starts to decrease and DP will also start to drop. Carcass weight loss is about 2.5%, 3 - 4% and 6 - 7% after a 12, 24, and 48 hr fast, respectively. Water deprivation can result in another 2% loss in carcass weight. Depending on the distance traveled, truckers report shrink losses of 3% to 10% for goats going from farm to auction.
**Cooler shrinkage**

Cooler shrinkage is the weight loss that occurs as the carcass loses moisture during chilling. It is calculated as ((hot carcass weight – cold carcass weight)/hot carcass weight)*100. It normally ranges from 2% to 3.5% but can be as high as 4 - 6% for young suckling kids or extended chilling periods.

**Carcass to bone ratio**

Carcass to bone ratio is the ratio of the weight of the entire carcass compared to the weight of the bones in it. Similar terms are meat to bone ratio and muscle to bone ratio. Meat and muscle are interchangeable terms for what’s left after deboning the carcass and usually include carcass fat. Therefore, although we often consider carcass to bone ratio and dressing percentage to be measurements of the meatiness of an animal, they are also indicators of the body condition of an animal. Fatter carcasses will tend to have higher carcass to bone ratios and higher dressing percentages. Just like humans, some goats build short thick muscle while others have a body conformation that leans towards long lean muscles. However, despite these differences, the absolute ratio of muscle mass to bone does not vary a great deal within an animal species. As in humans, the ratio of fat mass to bone has the biological potential to vary far more.

**Carcass makeup**

When a goat carcass is split into halves between the 12th and 13th rib, approximately 45% of the weight will be in the hindquarters and 55% in the forequarters. The proportion of marketable retail cuts from a carcass can vary depending on breed, conformation, sex (intact males will generally be heavier in the neck and shoulders), animal size, and fat cover (the more fat on the carcass the more cutting losses during trimming).

**Marketing Skills**

**Calculating when to breed your does**

Daily weight gains for baby goats from kidding to weaning at 3 months range from about 1/3 to ½ lb daily in many meat goat herds although some kids can grow as slow as ¼ lb daily and some big singles as much as 2/3 lb daily. Kids from large litters will tend to grow slower than kids from small litters and kids to yearling does often grow slower than kids from mature does. Most herds count on their kids gaining about 10 to 15 lbs per month from birth to weaning and from 8 to 12 lbs per month from weaning on. It is good to know the average weight gains for kids in your herd because it can vary widely depending on breed and management.

Let’s pretend you want to market suckling kids weighing 30 to 40 lbs live for Western Easter on April 16th in 2006. We’ll assume that your kids average about 7 lbs at birth and most of your kids grow about ½ lb daily. However, your twin kids from yearling does and some of your kids from triplet litters only grow 1/3 lb daily. Goats are generally purchased and shipped to slaughter
about 7 to 10 days before Easter so you want your kids to weigh 30 – 40 by April 6th. When should your kids be born?

*Growthy kids:* 40 lb target weight – 7 lb birth weight = 33 lbs of gain. At ½ lb of gain daily your growthy kids will need about 66 days to be ready to market.

*Slower growing kids:* 30 lb target weight – 7 lb birth weight = 23 lbs of gain. At 1/3 lb of gain daily, these kids will need about 69 days to be ready.

Count backwards on a calendar 66 to 69 days before April 6th to see when your kids need to be born. Apr, 6 days; Mar, 31 days; Feb, 28 days = 65 days so you want your kids born ~ Jan 27 - 31, or roughly the last week in January.

Now you need to figure out when to breed your does to get the majority to kid that week. The gestation period for goats is about 150 days so ideally you want your does bred during the last week of August. The heat cycle is about 18 – 21 days but early in the season most does will be stimulated to come into heat about 4 – 7 days after you put the buck in with them. This is called the “buck effect”. Thus, the vast majority of your herd will get bred within 2 weeks of the buck’s introduction. You will want to bring the buck into the herd by the second week in August. Greek Easter is April 23rd so you could probably sell kids that are born a week or two late during that holiday. Otherwise you may opt to put the buck in a week or two earlier especially if the buck is young and inexperienced and your buyer will tolerate some kids that are heavier than 40 lbs.

*Evaluating goats for market grade and readiness*

Evaluating goats for market grade and readiness is a critical skill for a meat goat farmer. There are three USDA selection grades for live goats. These grades are supposed to be based on the meat type conformation of the goat, how thickly muscled is it regardless of fat cover. Selection 1 goats should have a pronounced bulging to the outside hind leg, a full, rounded backstrip and a moderately thick outside shoulder. Selection 2 goats have moderate meat conformation while Selection 3 have inferior conformation.

<table>
<thead>
<tr>
<th>Selection 1</th>
<th>Selection 2</th>
<th>Selection 3</th>
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<tr>
<td><img src="image1.jpg" alt="Selection 1" /></td>
<td><img src="image2.jpg" alt="Selection 2" /></td>
<td><img src="image3.jpg" alt="Selection 3" /></td>
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Some buyers will also put in a 4th grade for very unhealthy goats. Utility or “cull” goats are goats that are being culled for a serious unsoundness or appear very unthrifty.
A buyer can make a good guess at the selection grade of a goat by knowing its breed, age and weight. For example, suckling Boer X Dairy kids growing $\frac{1}{2}$ lb or more daily will almost always grade Selection 1 while Boer X Dairy kids growing $\frac{1}{3}$ lb or less will rarely make this grade.

It is difficult for weaned market kids from dairy goat breeds originating in the Alps to grade Selection 1 because their muscles tend to be very lean in appearance. Some Nubian, La Mancha and Kiko kids show more bulge to their muscles while Boer X kids and certain strains of myotonic goats such as the Tennessee Meat Goat have more potential to reach Selection 1. However, management and health are major influences on selection grade. Also even though fat covering is not supposed to be a consideration, muscles with some fat covering tend to look thicker. Selection grades do not always go side by side with customer preferences. Just because a goat is Selection 1 does not mean it will be the optimum goat for a specific market. The customer’s desires with regard for fat covering, age, sex, and carcass weight must be met.

It is important to know how your weight gains and feed costs interact. For example, if your target is to have 80 lb market kids by Christmas and your kids are born in April, it may make more sense to feed them only a limited amount of grain while raising them on summer and fall pasture than to go ahead and push them. Savings in feed costs may offset lower weight gains.

Market readiness depends on whether goats have reached the desired selection grade and carcass weight. It is also affected by health status. If your kids are growing slowly because of health problems it is important to isolate the problem early. Examine your kids regularly for internal parasites by checking that their eye membranes are a healthy dark pink color and not anemic and by taking fecal samples periodically. Any diseases such as foot scald or soremouth that depress appetite may also slow growth. Corynebacterium abscesses, if on a lymph node in a hind leg or shoulder, can result in part of a carcass being condemned. Subcutaneous rather than intramuscular injections should be given to market goats to avoid bruising the muscles (meat). This is usually not a concern for injections of vitamins (e.g., Thiamine), minerals (e.g., BoSe) or reproductive hormones (e.g., lutalyse) as they are given in small quantities and cause little or no bruising. Drug withdrawal periods (the time needed after a medication or chemical is given to an animal for residues in the meat to reach legal and safe tolerance levels) should be scrupulously followed; otherwise the animal is not “market ready.”

Fat covering has some effect on market readiness. In the example below, both Boer X market kids may qualify as Selection 1. However, the kid on the left has little or no surplus fat. He may be “market ready” if he was cheaper to raise than the plumper kid and if he is being slaughtered on-farm by ethnic customers suspicious of excess fat who plan on consuming him the following day. However, he has two disadvantageous, 1) his dressing percentage and hence his carcass weight would have been better if you had let him fatten a few more weeks, and 2) his carcass lacks almost any protective fat covering and will be susceptible to cold shock when put in the cooler. Cold shock (contraction or shortening of the muscles) will toughen up the meat. He is not “market ready” if the price paid is based on hanging carcass weight rather than live weight and...
he is going to be slaughtered and chilled at a conventional slaughterhouse for sale to a restaurant chef putting a top priority on tenderness.

**Determining Types of Slaughter Goats to Raise**

One of the first decisions a meat goat farmer needs to make is whether to market suckling kids or weaned market kids or both. Suckling kids for the Easter market must be born in the winter. In a cold climate, this means you will need to invest in a draft free, yet well ventilated, barn and excellent winter feed and bedding for their dams during late pregnancy and lactation. Frigid temperatures at birth leading to frozen or weak newborn kids are the main problems. Pneumonia and bacterial diarrhea problems from poorly ventilated barns and overcrowding can also be problems. Prices received for suckling kids ranged from about $1.35 to $2.10 per lb live weight in 2004 and varied according to the quality of the kids and access to competitive buyers. Unthrifty kids could sell for less than this and farms selling directly to end consumer or retail stores might do far better.

In contrast, market kids are often born in late March through early May and graze out on pasture until slaughter anywhere from 45 to 100 lbs from mid summer to early winter. A three-sided barn at kidding time can often suffice even in cold climates. Instead, your investment will be in good quality pasture and goat proof fencing or in an economical source of good quality roughage to base their diet on. Internal parasites are probably the biggest problem with raising market kids.
The amount of expensive supplemental grain needed during late pregnancy and lactation and for the weaned kids will depend on the quality of your roughage. These kids generally sell for less than suckling kids, ranging from about $.80 to $1.25 per lb live weight depending again on quality and access to buyers. Again, unhealthy animals may bring less and direct sales may bring more.

**Determining which Marketing Options to Pursue**

Slaughter goats and goat meat can be sold through a wide variety of marketing channels. It is important that you decide how much of the marketing responsibility you are actually prepared to take on either as an individual or as part of a cooperative or farmer group. There are many costs associated with taking on marketing responsibilities. This “marketing bill” includes advertising, merchandising, assembling, transporting, processing, packaging, and properly storing the product. If you are not good at 1) getting financing, 2) keeping records, and 3) getting things done at JUST the right time, then trying to take on more marketing responsibilities will only make your situation worse.

Other questions to address when you are trying to decide whether to pursue more direct market channels are:

1. How much do you like talking to strangers?
2. Do you feel comfortable boasting about your product?
3. How well do you handle stress?
4. How much extra time and money do you have to invest in marketing your product?
5. What previous marketing experience have you had?
6. How good were you at it?

Establishing your own distributor or retail business requires a substantial investment in capital and labor. As well as estimating your “marketing bill”, you’ll need to estimate your “market area”. For example, consumers will generally drive 20 miles to a direct or farmer’s market; however, this varies with product availability, premiums placed on product quality, other items that are available including entertainment, and “normal driving ranges” for the region’s population. From this knowledge, the direct market seller can quickly estimate “the market area” by drawing concentric circles with a radius of 10 miles, 20 miles, 30 miles on a map with the center being the location of the current or future farmers’ market, or farm gate business.

You need to be willing to conduct your own market analyses and/or feasibility studies in order to make a business plan and project income and expenses. If you cannot accomplish this research, chances are you won’t have the time resources to expand your marketing efforts. It is very important to determine if it is feasible to expect savings from cutting out middlemen before you take on these extra responsibilities.

It’s a good idea for new producers to market their goats through conventional marketing channels such as regional auctions or livestock dealers when first starting out. This is because new producers usually need to focus on learning to manage their goats well. However, one way a new farmer can key into more specialized marketing opportunities without having to invest a lot
of time is by joining a local goat producer association. New farmers that enjoy meeting strangers and have a prominent farm location near goat consuming cultures may also find that they can sell live slaughter goats on-farm without substantial additional investments.

In summary, the goat meat market is wildly diverse unlike a commodity market. Exploring the many possible market approaches can be both exhilarating and challenging.

Below are links to four spreadsheets to help calculate returns from selling to regional auctions, livestock dealers or retailers, to cooperatives with a commission, or as part of a marketing pool direct to a retail store. These marketing channels are fairly easy shortcuts along the goat meat supply chain but will be impractical for producers living long distances from processors or direct consumers. Keep in mind that none of these spreadsheets include the actual costs of raising your goat kids.

**Microsoft Excel Spreadsheets**

- Selling to auctions
- Selling to dealers or wholesalers
- Selling to cooperatives
- Direct sales

Information contained in this document is part of a web-based training and certification program for meat goat producers ([http://www2.luresext.edu/goats/training/qa.html](http://www2.luresext.edu/goats/training/qa.html)) that was developed with funding received by Langston University from USDA/FSIS/OPHS project #FSIS-C-10-2004 entitled "Development of a Web-based Training and Certification Program for Meat Goat Producers."

Collaborating institutions/organizations include Alcorn State University, American Boer Goat Association, American Kiko Goat Association, American Meat Goat Association, Florida A&M University, Fort Valley State University, Kentucky State University, Langston University, Prairie View A&M University, Southern University, Tennessee Goat Producers Association, Tennessee State University, Tuskegee University, United States Boer Goat Association, University of Arkansas Pine Bluff, and Virginia State University.