

Colorado 4-H Raising and Showing Market Lambs Member Manual MA2500C



Club _____

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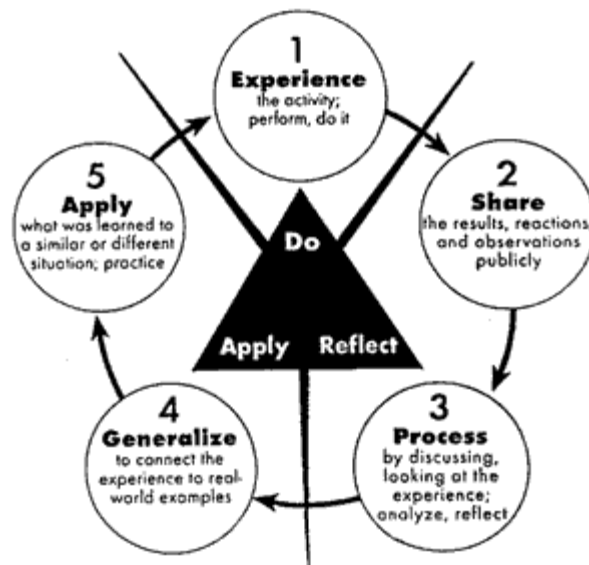
County _____

A youth manual for market lamb projects in Colorado

Developed by

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The 4-H program has adopted a process that allows youth to first learn by doing before being told or shown how and then process the experience. The experiential learning model developed by Pfeiffer and Jones (1985) and modified by 4-H includes five specific steps:



1. Participant(s) **experience** the activity - perform or do it.
2. Participant(s) **share** the experience by describing what happened.
3. Participant(s) **process** the experience to determine what was most important and identify common themes.
4. Participant(s) **generalize** from the experience and relate it to their daily lives.
5. Participant(s) **apply** what they learned to a new situation.

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Table of Contents

Section I – Starting a Market Lamb Project

Introduction.....	4
The Decision.....	4
Setting Project Goals.....	5
Developing a Time and Money Budget.....	5
Designing a Marketing Plan.....	6
Facilities.....	7
Record Keeping.....	9

Section II – Raising Market Lambs

Breeds of Sheep.....	10
Age and Conformation.....	12
Problems with the Legs.....	13
Jaw Structure and Finish.....	15
Handling the Lamb.....	16
Nutrition and Feeding.....	17
Health.....	21

Section III – Showing Market Lambs

Fitting and Showing.....	24
Training and Showmanship.....	25
Fair Checklist.....	28
Junior Livestock Auction.....	29
Where does your lamb go?.....	29

Appendix 1 - Sample Budget

Appendix 2 - Animal Health Note Card

Appendix 3 - Cuts of Lamb

Appendix 4 - National Animal ID and Meat Quality Assurance

Appendix 5 – Feeding Worksheet

Appendix 6 - Additional Resources

Section 1 – Starting a Market Lamb Project

Introduction

Colorado is the 3rd largest sheep producing state in the country and the 2nd largest market sheep and lamb producer in the country. The market lamb project is an ideal way for 4-H members to become involved in raising market animals. Some of the advantages to raising markets lambs are:

- Small Initial Investment
- Quick turnover of several months, compared with a year or more in other projects
- Minimal space requirements
- Lambs are safe to handle for younger members

Should you raise market lambs?

Raising a market lamb is a full-time responsibility. You will need to care for your lamb twice a day everyday during all types of weather. Your lamb will require feed and fresh water at all times and careful feeding to assure it is the correct weight to be shown at the fair. It will also need regular exercise, training, grooming, and companionship. Sheep are flock animals and you will have the most success with your lamb if it has a companion. It is wise to raise and fit two lambs for fair or keep your lamb someplace where it will have a companion.

The Decision

Once you and your family have decided to begin a market lamb project and are committed to the responsibility of owning an animal, there are several more steps that need to be completed in order to prepare yourselves. Make sure you answer the following questions with help of other club members or your 4-H leader to make sure you are well prepared for your market lamb project.

1. What kind of goals do I have for this project?
2. How much time and money do I want to invest?
3. How do I plan to market my lambs?
4. What are my facilities suitable for? Do they need improvement?
5. What kind of lambs do I want to raise? i.e. type, breeding or market animals.
6. How many animals can I feed at one time?
7. Do I have the resources available to provide proper health care?
8. Am I comfortable with selecting animals to purchase?
9. What classes are available at my local fair?
10. How can I transport my lamb?

A great way to gather information is to attend and observe a sheep show. During this time, you can see first hand some of the work and commitment that is part of this project. In addition, this is a great chance for you to meet and talk to exhibitors and producers. Most of these people are happy to share their thoughts and suggestions. It is important to develop good relationships with the other producers in your industry in order to form a strong network of people to learn from and share ideas with.

Setting Project Goals

As in life, setting goals is invaluable to your market lamb project. The goals that you make will determine the direction that your project takes. Evaluate why you are choosing this project. If you are not interested in a long term commitment, a sensible goal could be to compete only at the county fair with your market lamb. No matter what goals you decide upon, commit yourself to developing a detailed plan to accomplish your goals. It is helpful to include your goals as part of your record books. This aids in measuring your project's success. Remember that short term goals, such as learning to groom a lamb properly, should help you to reach your long term goal, like showing at the fair.

Long Term Goals:

1. _____
2. _____
3. _____
4. _____
5. _____

Short Term Goals:

1. _____
2. _____
3. _____
4. _____
5. _____

Developing a Time and Money Budget

The market lamb show industry is very popular. A market lamb project includes purchasing a young lamb after it has been weaned from its mother, usually at around 8 weeks old. The project member then has the responsibility of feeding and caring for that animal until it is ready to be marketed. An important advantage to this part of the industry is that a project member can purchase a young lamb, feed it out and sell it in a matter of a few months. This shorter time period and lower investment makes this project appealing to new members.

After deciding the amount of time and money that you are able to invest, it is helpful to develop a budget in order to measure your success and provide a guideline for your project. A sample budget is provided in the appendix of this manual.

Designing a Marketing Plan

It is important to remember that a lamb project is similar to running a business. Like any good business, a project member must know where the product will be sold. The process of getting a product to the point where it can be sold or used is called marketing. The place where that occurs is referred to as a market.

The type of market you target depends on the type of project you decide to pursue. There are several different marketing plans that can be used. It is important that each operation design the marketing plan that will be the most effective for that specific operation.

Each project member has the choice to participate in developed markets or create a “niche market”. Several existing markets are defined below. While making a marketing plan it may be helpful to use these options as general targets. However, it is still necessary to define the specific targeted market. This is done by defining the desired customer, creating a demand calendar, and determining the optimal product.

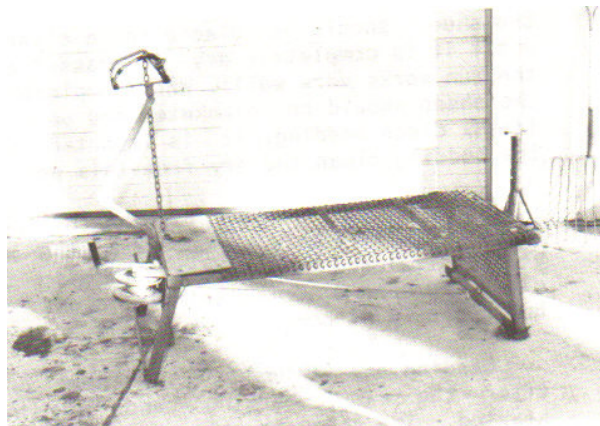
- **Show Prospect Markets** – selling lambs to your fellow 4-H and FFA members
 - **Advantages:**
 1. Prices are normally fairly stable.
 2. Lambs shown in the different shows provide publicity for the producer.
 3. Lambs are sold at young age, so income is more immediate.
 - **Disadvantages:**
 1. This is only an outlet for those sheep that are high enough quality to be competitive in the show ring.
 2. The show ring is subject to trends and cycles. It is necessary to keep up with these in order to keep sheep in demand.

- **Youth Livestock Sales** – This is a market for lambs that are exhibited in youth shows.
 - **Advantages:**
 1. The market is established.
 2. The seller usually gains a premium over market value.
 - **Disadvantages:**
 1. Buyers can be limited and therefore may be overused.
 2. The seller will have to find buyers.
 3. There is no guarantee that your animal will be accepted into a Junior Livestock Sale (have to “make the sale”)

Facilities

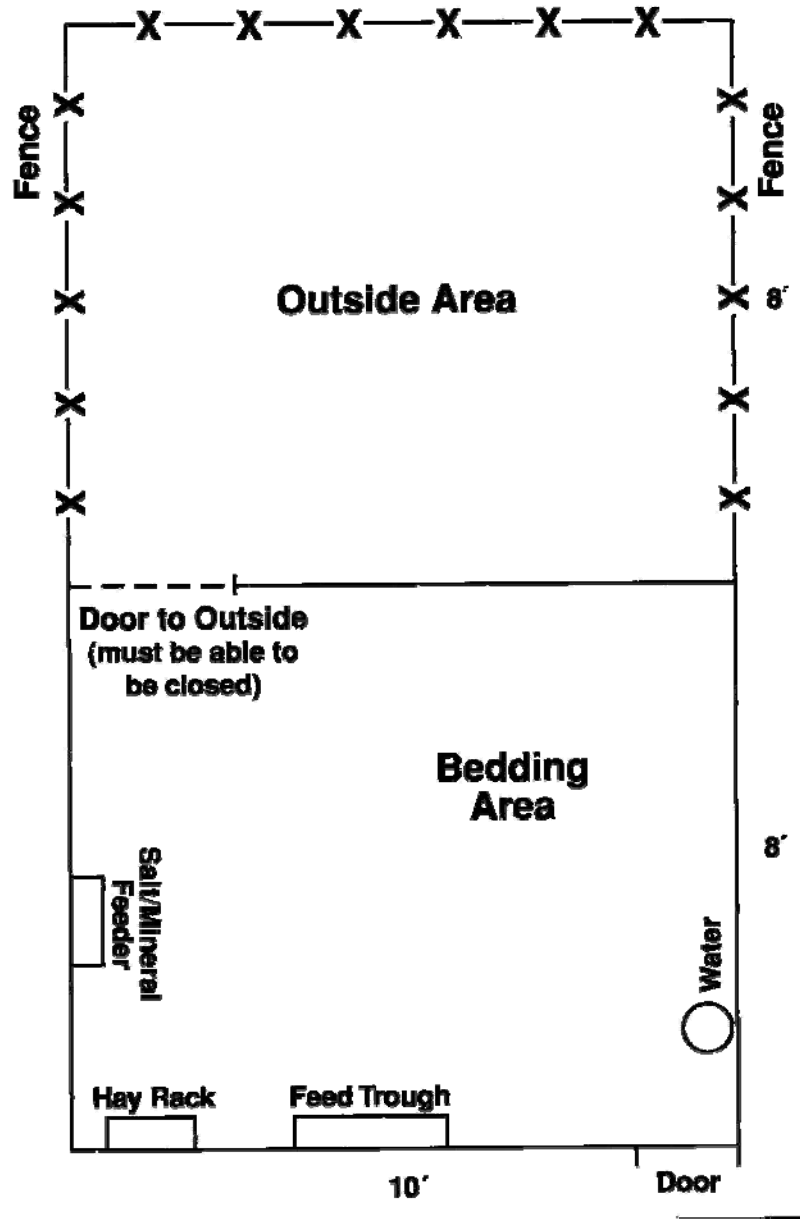
Sheep are relatively simple to keep and can be kept adequately on small acreage. However, some special needs do need to be taken into consideration. Each lamb will need approximately 20 square feet of outdoor space and 10 square feet of indoor space. However you choose to keep your lambs, the fencing around their enclosure should be dog proof to keep out stray dogs and coyotes, which can pose a real threat to your lambs in both a rural and urban setting. Some type of mesh fencing is best. This can be accomplished by securing mesh fencing along livestock panels, by using chain link fence, or a variety of other ways. If you don't already have them, you will need to purchase hay racks or feeding troughs, a watering trough, and a small box or mineral feeders for loose minerals or blocks for your lamb's living space. If electricity will be available to your sheep pens, it is also wise to invest in a heated water bucket or tank heater for cold weather use. This alleviates the concern of lambs not having access to water at all times. Make sure lambs cannot bite or chew at any cords. The following is a checklist of other general considerations for your lamb.

- The indoor area should be cool, dry and draft free.
- Sawdust or wood shavings are the best bedding, since the lamb may eat straw and develop digestive problems. However, sawdust and shavings should be avoided for lambs intended for wool production.
- Make sure lambs have shade in the summer.
- Make sure fresh and clean water is available at all times.
- Keep troughs clean. Lambs will put their feet in the troughs and defecate into them, so keeping it clean is imperative.
- Keeping solid wooden pallets or concrete pads in your pen will encourage your sheep to venture out for fresh air, even when the ground is muddy, since it gives them a dry place to lie.
- Having some kind of stand with a head catch to secure your lambs in for everyday use such as medicating, hoof trimming, and grooming is very important. These stands are easy to construct, or can be purchased.



Commercially made stand

Example of Facility for 2-3 Market Lambs



Source: Ohio State University Sheep Resource Handbook

Record Keeping

The best way to measure progress in your project is with record keeping. As discussed earlier, all livestock projects are similar to a business. The ultimate goal for each of the livestock projects is to produce some sort of product. The product may be milk, or fiber, or meat. The best way to make sure that the business is producing the highest quality products with the lowest costs is through record keeping.

Records will help you to keep track of expenses and income and assist you in measuring the genetic and physical progress of each animal. Individual tend to keep records using their own methods. Whichever method works best for you, make sure to include all useful information.

Record keeping can be made easier with a computer. It may be helpful to look for existing computer programs or develop your own spreadsheet. The following checklist is the type of information that you need to establish and maintain for each project.

Record Keeping Information Checklist:

- Expenses
- Income
- Animal Inventory
- Feeding Records (i.e. amount and type needed)
- Animal Health Records
- Breeding Records
- Birthing Records
- Weaning Weights
- Weight Gain
- Goals

Section II – Raising Market Lambs

Selecting the Right Type of Lamb

Breeds of Sheep

There are many different breeds of sheep to choose from for your market lamb project. The most popular breeds of sheep for 4-H projects are:

Hampshire

Hampshires were developed in Southern England. They are a large breed with rams weighing 250-350 lbs and ewes weighing 175-250 lbs. They are black faced with medium-wool fleeces. They have great milking ability, growth, and cutability.



Dorset

Dorsets are a medium-sized breed with rams weighing with 200-250 lbs and ewes weighing 140-180 lbs. They can be polled, scurred, or horned. They are very prolific breeders and can sometimes produce more than one lamb crop per year. They yield heavily muscled carcasses.



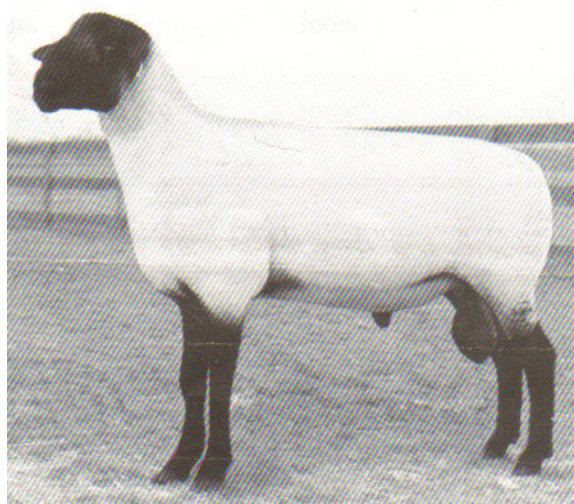
Southdown

Southdowns are also a medium-sized breed with rams weighing 180-230 lbs and ewes 120-180 lbs. They are the oldest breed of sheep from England and they produce very meaty carcasses. They are polled with a face ranging from grey to mouse-brown and wool on its legs.



Suffolk

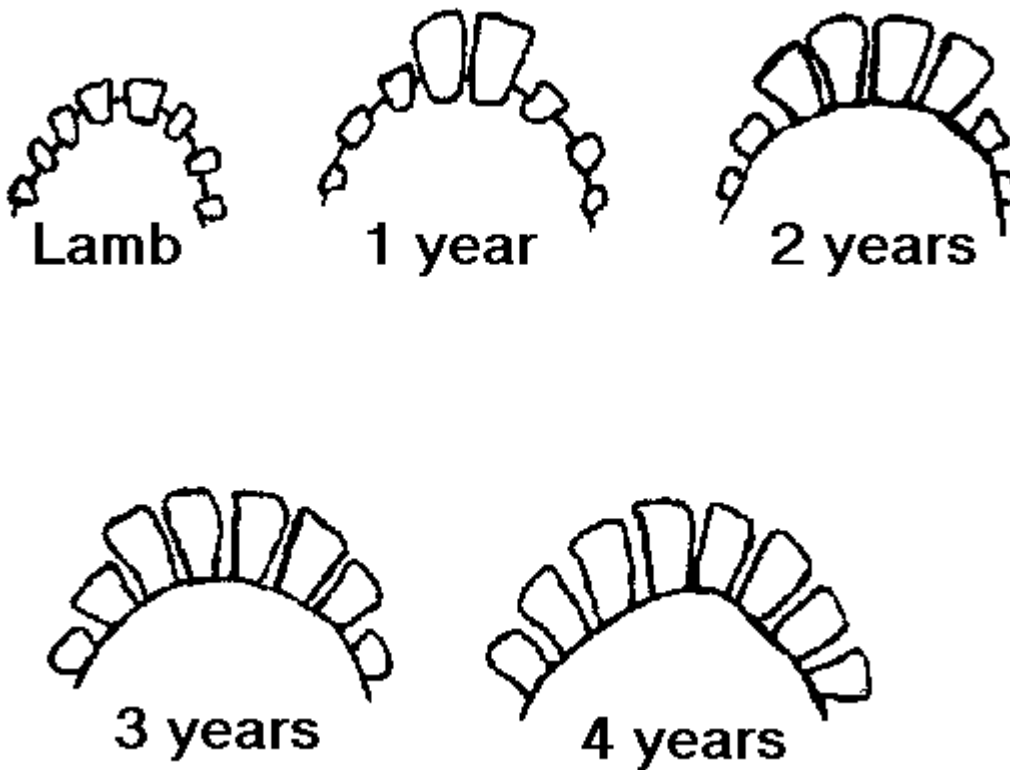
Suffolks are a very large breed. The rams can weigh from 275 all the way to 400 lbs! Ewes usually weigh between 200-300 lbs. Lambs grow rapidly and produce carcasses with high cutability. They are polled and have a black head and legs. They are the most prolific breed of sheep in the United States.



There are additional breeds of sheep, such as Oxfords, Rambouillet, and Columbia that may be exhibited as market lambs. These breeds are not as common, but can also be shown as market lambs.

Age

Market lambs can be purchased after they are weaned from their mothers and are usually kept until they are ready to market. If you are looking for a show wether or doe, make sure he or she will be within age limits that may exist at the target show. For example, several shows require that a market wether or doe still have their milk teeth. In the illustration below, you can see how the lamb grows in two permanent teeth each year. A market wether or doe usually must not have reached one year of age to be shown at the fair.



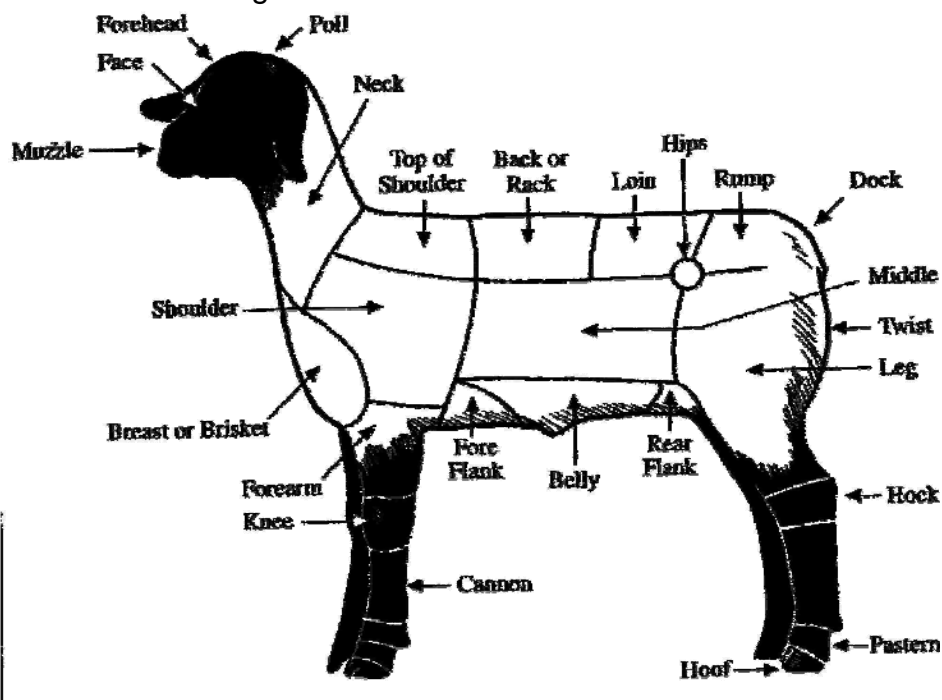
Source: Sheep101.info

Conformation

A quality lamb will catch your eye in the pen. You should select a lamb with good length of body and leg. These traits indicate the lamb's predisposition to grow. Good muscle development over the hind-quarters and rear legs is also essential. You shouldn't select lambs that are short, fat, narrow, or rugged.

The ideal market lamb combines good weight on a pleasing frame, straightness, natural muscling and trimness. There are eight essential parts to good conformation:

- 1) Correct turn of top
- 2) Thickness through center of the leg
- 3) Length of Leg Muscle
- 4) Structurally correct rear legs
- 5) Squareness of rump
- 6) Depth of fat and trim in crotch area
- 7) High dock setting
- 8) Width between the hind legs



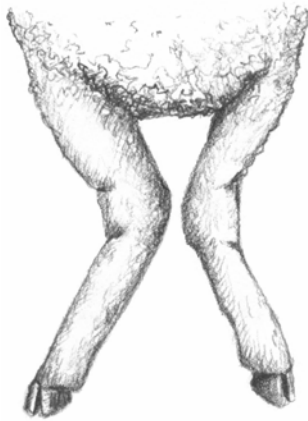
Source: Ohio State University Sheep Resource Handbook

Problems with the Legs

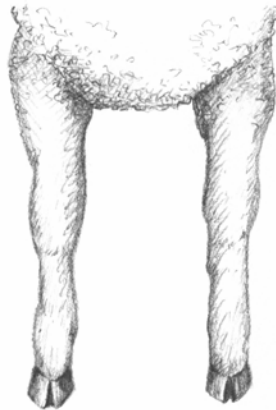
Forelegs

The forelegs should have a vertical line from the point of the shoulder to the ground and divide the leg into two equal halves. There are several problems that can arise in the forelegs

- 1) Calf-Knees-when the leg is bent slightly backward
- 2) Knock-kneed-when the lamb has knees that are set too close together. Sometimes they will even touch one another.
- 3) Splayfooted- when the lamb has toes that point outward.
- 4) Pigeon-toed-when the lamb has toes that point inward
- 5) Bowlegged-when the knees “bow” outwards.



Knock-kneed



Correct



Splay-Footed

Source: From Your Sheep: A Kid's Guide to Raising and Showing" © 1992 by Storey Publishing, LLC.

Hind Legs

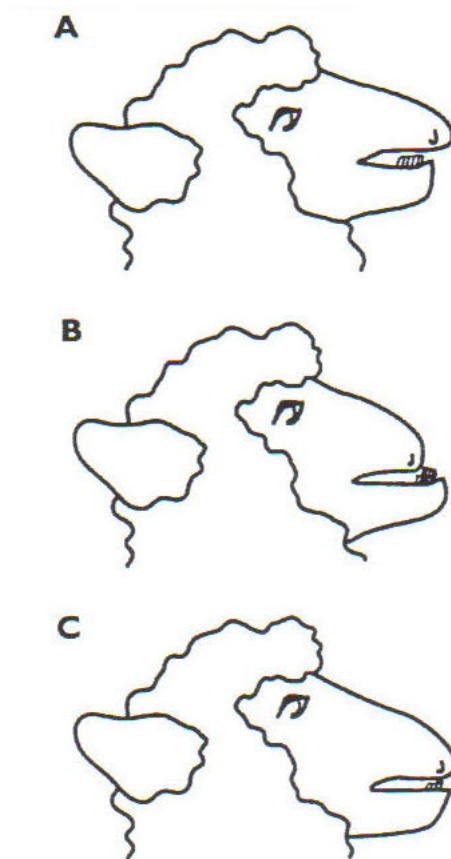
The hind leg should appear so that you can draw a straight line from the pin bone to the outer edge of the cannon bone. There are a couple of problems that can affect the hind leg

- 1) Sickle-Hocks-the hock joint has too much “set” or angle at the hock.

2) Post-legged-this condition changes the angulations of the bones at the hock and the stifle joint and shortens the stride. This may cause the patella to be displaced which can make for an unsound animal.

Jaw Structure

Jaw structure is very important in sheep because a defect can interfere with the sheep's ability to eat. In a normal mouth, the jaw is aligned straight (C). If the upper jaw is longer than the lower jaw, this is called a parrot mouth (A). If the lower jaw is longer than the upper jaw, that is called a monkey mouth (B).



Source: Ohio State University Cooperative Extension

Finish

The finish is a very important aspect to the overall value of the lamb, because it determines the retail value of the lamb. Finish refers to the amount of external fat on the lamb. You can feel your lamb's backbone and ribs to help determine the finish. If you can feel the backbone and ribs very well, the lamb doesn't have enough fat. If you cannot feel the backbone or ribs at all with normal handling when applying a little pressure, the lamb has too much fat. Desirable finish is .15-.20 inches of backfat. There are six areas in which finish can be evaluated

- 1) Sternum
- 2) Lower fore rib
- 3) Upper rear rib
- 4) Over backbone and loin
- 5) Flank
- 6) Twist

Catching and Leading a Sheep or Lamb

How to Handle Your Animal

Handling your lamb with care is very important. You don't want to hurt your animal when you are handling it. First of all, it will cause stress to your lamb and second of all, the lamb won't want to be caught and work for you if you aren't handling it properly.

- The easiest way to catch your lamb is by hind flank.
- When you enter your lamb pen, move the lambs so you can get behind them.
- Grab the lamb's hind flank.
- Use your free hand to grab under the lamb's jaw. When you have control of your lamb's head, you can control the entire lamb.
- Release the flank and place your hand on the dock. You can use this hand to encourage forward motion.
- Always lead your lamb by the left side. Stay near the shoulder and face the lamb, and walk along with it.

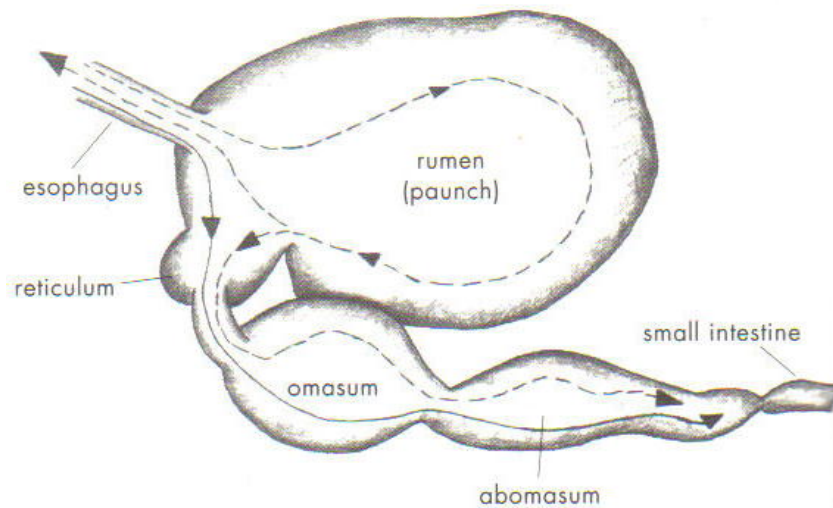


Source: Mississippi State University Cooperative Extension

Nutrition: The Cornerstone of your Market Lamb Project

The Digestive System

Sheep have a very different digestive system than humans do. Sheep, goats, cattle and deer are examples of a class of animals called ruminants. Ruminant animals regurgitate, a fancy word for throw-up, a wad of feed called cud and re-chew it. The stomach of a ruminant is divided into four sections: the rumen, the reticulum, the omasum, and the abomasum. Of course the sheep chews and swallows just as a human does, but the similarities end there. After food is swallowed and passed down the esophagus it is stored temporarily in the rumen and reticulum, where it is exposed to types of “good” bacteria that help the sheep to digest the food. It is then regurgitated and the cud is returned to the sheep’s mouth. Often you will spot your sheep lying in a sunny spot chewing. It is not eating; it is chewing its cud. The omasum grinds food and removes water from it, and finally the abomasum acts as the true stomach that breaks down the food into useable nutrients.



Source: From Your Sheep: A Kid's Guide to Raising and Showing" © 1992 by Storey Publishing, LLC.

Nutrients

There are five nutrients that are essential to your sheep's well being

1) **Water** - Nearly two thirds of the body is water. This is true for humans as well as animals. Water assists the body in digesting food and also carries nutrients throughout the body. It also helps get rid of wastes and aids in temperature regulation. It bears to be repeated that fresh, clean, and unfrozen water must be available to your sheep at all times!

2) **Protein** - Proteins are like building blocks. They are the foundation on which the rest of the body is built. They are used to build muscle, blood, organs, and the skin. An animal can also use protein as an energy source. Meals like soybean or fish meal are high in protein. Simple grains like corn and barley tend to be lower in protein.

3) **Carbohydrates** - Carbohydrates are the main energy source of the body. The energy produced by carbohydrates makes chemical reactions that help turn the feed the sheep eats into muscle, or meat. Sugars and starches are carbohydrates. Corn is a feed stuff that is high in carbohydrates.

4) **Fats** - Fats are a great energy source. They supply more than twice as much energy than an equal amount of carbohydrates can. They are helpful in keeping weight on hard keeping animals or during very cold weather. In most cases though, only small amounts of fat are needed in the diet. Corn oil is a good example of a fat source.

5) **Vitamins and Minerals** - Salt, calcium, phosphorus, magnesium, Vitamin E, and biotin are all examples of important nutrients in the diet. You should always provide your sheep with a salt or trace mineral salt block so they can regulate their salt

consumption. A mineral supplement can also be provided free choice. Sheep will eat it only when they need it. Copper is extremely toxic to sheep, so it is important that you purchase vitamins, minerals, and feeds specifically for sheep or formulated for “All Stock”, as these products will be free of copper. Horse and cattle feed can kill a sheep in just moderate quantities, so take care to make sure they don’t have access to them. If in doubt, check the feed label to see if the product contains copper.

What to Feed Your Lamb

Your lamb will need roughage during the feeding period. Roughages are fibrous materials like alfalfa or grass hay. Roughage feeds the bacteria in the rumen of the lamb, described on the previous page. You will also use concentrates that are high in energy like corn and oats. A good growing or finishing ration should contain both roughages and concentrates.

In most towns and cities, you can find a feed mill that manufactures a feed formulated specifically for growing market lambs. Generally, this is called a “grower” ration and later in the feeding period, you will feed your lamb a “finishing” ration. These grain mixtures are already formulated to meet all of your lamb’s nutritional needs. They contain ingredients like corn, oats, soybean meal, cottonseed meal, molasses, beet pulp, and alfalfa pellets. They will usually also contain a vitamin and mineral supplement. You should still provide a free choice mineral supplement and salt block to your lamb.

You can also formulate your own feed using different ingredients, but keep in mind that the people who formulated the commercial feed rations spent many years learning how to do so. Formulating a ration can be very complicated, and the easiest and most surefire way to feed your lamb is by using a commercially produced grain ration and following the directions on the label.

Feeding

Feeding your lamb to the correct market weight is the cornerstone of your market lamb program. If your lamb does not make weight to show at the fair, then none of the hard work you did to get there will matter.

There are two methods to feeding your lamb which are hand-feeding or self-feeding. Self-feeding allows the lambs to eat as much as they want whenever they want while hand-feeding means feeding your lamb a few small portions throughout the day. Hand-feeding provides some advantages that self-feeding does not

- 1- You can regulate the feed intake to fit your lamb’s needs.
- 2- Lambs are easier to keep on feed
- 3- Overeating disease is less of a problem
- 4- Hand-feeding makes sure you see your lambs at least twice a day.

You should start your lambs on a good growing ration, referred to by many feed manufacturers as a grower feed. The grower feed should be at best **16% protein**. Some lambs enjoy grain and will overeat, so it is important to introduce your lamb slowly to the grower feed. If your lamb was eating a starter feed before you received it, try to find out the brand and mix the starter grain the lamb was already eating with the grower grain you will be providing it. Mix the ration to be $\frac{1}{2}$ starter feed and one $\frac{1}{2}$ grower feed while gradually increasing the amount of grower feed a little everyday while decreasing the starter. This will prevent digestive upset in your lamb. If your lamb was on no grain prior to bringing it home, introduce the grain slowly starting with $\frac{1}{4}$ pound per day and gradually increase to about 2 pounds per day. Here are some other feeding tips:

- Feed only as much grain as your lamb will finish within 15 minutes. If the lamb leaves feed, decrease the ration until all the grain is eaten in that time period. Then, gradually increase the grain.
- Do not overfeed. If you accidentally over feed your lamb, reduce the next several feedings.
- If your lamb stops eating you will probably have to change the grain mixture. You can decrease some of the grain and add dried molasses or beet pulp to tempt your lamb into eating again.

How to Make Weight for the Fair

To make weight for the fair, you must consider how many days you have to feed your lamb. For example, let's say you have 120 days to feed your lamb. If your lamb weights 70 pounds when you purchase it and needs to weight 150 pounds to make weight for the fair, your lamb will need to gain .66 or about $\frac{2}{3}$ of a pound per day. You can figure this out by:

First, take the weight your lamb needs to be by fair, and subtract how much it already weights

150 lbs. needed by fair - 70 lbs. currently = 80 lbs. to gain in 120 days

Next, divide the weight by the number of days you have until the fair
80 lbs. to gain / 120 days to gain it = .66 lbs. per day

Lambs typically need to eat 2 to 5 pounds of grain for every $\frac{3}{4}$ to 1 pound of gain. You will have to feed your lamb for a week or so to find out how much it is gaining on the ration you are feeding it. Try to weigh your lamb after feeding it for a week or two. Keep a record of how much grain it has been fed per day. If your lamb gained 7 pounds in one week and you were feeding it 3 pounds of grain per day:

7 lbs. of gain / 21 lbs. of grain = .33 lbs. of gain per 1 lbs. of grain

Your lamb is gaining .33 pounds or about $\frac{1}{3}$ of a pound for every pound of grain you feed it. If your lamb needs to gain .66 pounds, then how much grain should you feed it daily? You should feed it about 2 pounds of grain per day.

2 lbs. of grain x .33 lbs. of gain= .66 lbs. of gain

What is your lamb only gained 4 pounds on the 21 pounds of grain per week (3 pounds per day?)

4 lbs. of gain/21 lbs. of grain = .19 lbs. of gain per 1 lbs. of grain.

You will need to increase your feed ration to make weight for fair.

3.47 lbs. of gain x .19 lbs. of grain = .66 lbs. of gain

This is why it is very important to weigh your lamb as often as you can when first beginning to feed it, so you can be on the right track for the fair and see if you need to increase or decrease your feed ration.

Just because you do these calculations on paper does not make them work for your lamb. It may be impossible for your lamb to eat the amount of grain it needs to gain daily, or the lamb may need to be worked up gradually to the desired ration. Other factors such as extreme heat, illness, and stress can affect daily gain. Again, it is important to weigh your lamb often!

How to Calculate Average Daily Gain (ADG)

Average daily gain is the amount of weight gained each day.

ADG = $\frac{\text{Present Weight} - \text{Previous Weight}}{\text{Number of Days Between Weight}}$

The Health of Your Lamb

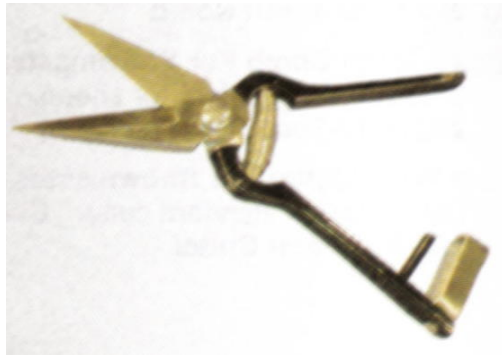
Temperature:	100.9 to 103.8
Heart Rate:	70 to 80 beats per minute, faster for kids
Respiration Rate:	12 to 15 breaths per minute, faster for kids
Rumen Movements:	1 to 1.5 contractions per minute

Your lamb will need vaccinations, worming, hoof trimming, and possibly shearing to remain healthy and to grow the best for you.

Make sure to ask the producer you purchased your lamb from if it was vaccinated before you purchased it and what it was vaccinated for. If the lamb was not vaccinated, make an appointment with your veterinarian to get the appropriate vaccinations for your lamb or you can give them yourself if you have someone knowledgeable to show you the proper procedures.

Your lamb will also need to be wormed a couple of times during the feeding period. Lambs pick up worms during the grazing from the grass or soil, even if they aren't on

pasture lambs can pick up worms in their pen. Lambs can be wormed with a variety of products that you can obtain from your veterinarian or local feed store. These include pastes, bolus, drenches, and injections. Never give your lamb an injection without the instruction of your veterinarian. If you must give your lamb other medications, make sure to take note of withdrawal dates if fair day is near. Sheep are also exposed to external parasites. You can treat sheep with pesticides that are contained in a dust. The dust can be purchased at your local feed or livestock supply. The best time to dust a lamb or sheep is after shearing. Make sure to treat all animals, even if they don't show any signs of being infested. Check withdrawal times on labels prior to treating any animals. Finally, you will need to trim your lamb's hooves during the feeding period. There are special trimmers designed for this you can purchase from lamb or goat supply catalogs. A utility knife or pruning shears will do in a pinch. The best way to learn to trim the feet is to have someone experienced demonstrate for you. Trim the hooves 2-3 weeks prior to showing to prevent lameness.



Shears that can be used for hoof trimming

Disease Descriptions:

Acidosis occurs when sheep eat too much feed with high levels of starch or sugar. This includes grains, grain by-products and vegetable parts. Acidosis makes the rumen more acidic and gives the sheep a stomach ache. If your lamb is affected by acidosis, it will appear depressed and be uninterested in food. It may also have diarrhea and the sounds of the rumen will decrease.

Enterotoxemia is caused by an organism that is normally present in the intestine of sheep and goats. When an animal's feeding schedule is changed suddenly or large amounts of grain are consumed the organism will grow rapidly and produce a toxin that causes death in a few hours. A lamb that is affected will stagger and appear disoriented. Vaccination against enterotoxemia is routine and should usually prevent its occurrence.

Caseous lymphadenitis (CL) can be contracted when sheep eat contaminated feeds or through breaks in the skin. There is even some proof that the bacteria can enter unbroken skin. The disease is caused by a fairly common bacteria found in the soil. CL causes abscesses around the lymph nodes, such as the jaw area and udder. These large abscesses are filled with a cottage-cheese like pus. If another sheep comes into

contact with the pus, they can become infected as well. An animal with a draining abscess should be segregated from others until it is healed.

Coccidiosis is caused by a tiny parasite which lives in the cells of the sheep's intestine. The severity of the disease depends on the number of parasites living in the intestines. If the diseased sheep becomes stressed the symptoms become worse and other disease may be contracted. Symptoms include diarrhea that is often black or blood-tinged and animals may stand off by themselves with their backs hunched. It can be treated with antibiotics.

Feedlot Rectal Prolapse can be caused by a short dock, excess weight, excessive coughing or a high grain diet. Even though your lamb is not in a feedlot, you are feeding your lamb as a market project and it could occur. Call your vet immediately so that the rectum can be sutured back into place or otherwise treated.

Footrot is caused by bacteria that live in the soil. It can live for years in manure, but usually only survives in the soil for a few weeks. You will notice limping if your lamb has footrot. Consult your vet if your lamb suddenly begins to limp.

Internal parasites include various types of worms that can be contracted through grazing in pastures. Each type of worm has a different life cycle and can be found at different times of the year. The presence of worms is normally indicated by a decrease in body condition and loss of appetite.

Pinkeye is identified by watering of the eye, redness in the whites of the eye, eyelid swelling and clouding over of the pupil. Several different organisms can be the cause of pinkeye. It is usually transmitted through contact with an infected sheep or by insects, traveling from sheep to sheep.

Ringworm is a skin fungus. Many fungi can live in the soil for long periods of time. When an animal is infected, rough, scaly circular areas develop. Infection is most commonly found on the head, ears, neck and sometimes the body and udder. Disinfect all lamb equipment with a 2 % bleach solution and avoid contact with other animals if there is risk of fungus. Ringworm is communicable to humans.

Scrapie will not affect your market lamb project, but it is important you know about the disease. Your lamb is required to have a scrapie tag to show at the fair. Scrapie (also known as TSE or wasting disease) has a two–five year incubation period. An infected sheep rubs its head and rump against buildings or fences, becomes nervous, and develops muscular tremors and convulsions that result in death. Only a small percentage of flocks are afflicted with this rare disease.

Soremouth is a viral disease found in sheep and goats. The virus can live for long periods of time in the soil and equipment in a barn or corral. The symptoms are thick, scabby sores that can be found on the lips and gums of an animal. In severe cases the sores can be found on the udders of does. These sores are painful and make nursing

impossible. Adult sheep will develop immunity to a disease if they are continually exposed to the virus. A vaccine can be given to lambs within a month of age. Once an animal has developed the disease, treatment is of little help. Softening ointment on the sores may be helpful. Most importantly make sure that the animal is still eating and drinking water.

Urinary Calculi are found only in male animals. Similar to kidney stones in humans, this disease is the formation of stones in the urinary tract. Calculi results from high phosphorus levels and an imbalance of phosphorus and calcium levels in the feed ration. Make sure that feed rations have a 2:1 calcium to phosphorus ratio, and 10 to 15 pounds of ammonium chloride per ton of feed. This, along with plenty of fresh drinking water will help to prevent calculi from forming.

What to put in your first aid kit:

- 1) Thermometer (digital is best)
- 2) Syringes in several sizes
- 3) Needles
- 4) Gauze and wrapping material
- 5) Antiseptic solution and ointment
- 6) Electrolytes
- 7) Gloves
- 8) Safety scissors
- 9) Iodine
- 10) Probiotic paste or powder
- 11) Phone numbers for veterinarian and Extension Agent.

Fitting and Showing Your Lamb

Equipment you will need to fit your lamb:

- Mild soap or shampoo for washing the lamb
- Electric clippers
- Rope Halter
- Feed pan and water bucket
- Blanket
- Wool cards
- Hoof Shears
- Fitting Stand
- Lamb tube or covers

You will need to shear your lamb. Electric shears can be expensive. Ask your local 4-H agent who you might borrow or rent them from if you don't want to buy them. Sometimes the 4-H agent may have a pair that can be loaned out. Slick shorn means the lambs are shorn very close all over. You should wash your lamb prior to shearing to remove most of the dirt in the wool. Washing will make it easier to shear the lamb. Make sure you look at your county rules to find out how long fleece has to be on your lamb. A slick shorn lamb should be covered after shearing to prevent sunburn and keep the sheep clean.

Another part of your lamb project is exercise. You are showing your lamb as a market lamb, which means for meat. Meat is muscle, and exercise is necessary to produce muscle. One way to provide your lamb with exercise without your help is to put the water bucket at one end of the pen and the feed trough at the other, so they must travel back and forth.

There is no fool proof plan for an exercise program. It is important to develop a program that fits your situation. The main requirement for an exercise program is safety. It is most effective to exercise the lamb intensely for a short amount of time. Therefore, whatever setup you choose to use, make sure that the obstacles are free of harmful edges and wires. It is helpful to make rounded corners in any pens and to make the sides solid so the animals can only see forward. This will help keep them from trying to jump out and possibly hurting themselves. You can also exercise your lamb by leading, which will get you in pretty good shape as well, or you can use a motorized vehicle at a very slow speed to jog them. Remember that if you have more than one lamb, you can exercise several at a time if they get along well and they are all well halter-broke.

Training the Lamb for Show

Start training your lamb as soon as it is settled into its new home. It is best to use a halter at first, even if you plan to show your lamb without one. Always use a halter away from home and at fair outside of the show ring for the safety of your lamb and others. You will need to teach your lamb to lead and set-up properly in the show ring.

Showmanship

After you have trained, fit and groomed your lamb, and collected the proper paperwork, it is time to go to the show! Most market shows include market classes which are separated by weight. They also include showmanship classes, which are separated by the age of exhibitors showing the animals.

Showmanship is the true test of a show person's knowledge of his or her project. Good showmanship can either make or break an animal in a competition. The purpose of showmanship is not to showcase the exhibitor. It is to help showcase the animal to its best ability. A good showman can evaluate his/her animal to determine its weaknesses. Once the weaknesses and strengths are determined, the showman can decide the best way to deal with each.

In order to present your animal during its class at the show, you must know some basic guidelines.

1. It is important to dress appropriately. A neat, unwrinkled shirt, usually with a collar and pants are acceptable with clean and shined leather shoes.
2. Always keep an eye on the judge. This is **very** important in order to keep track of what is going on in the ring. The judge will be moving around to get a better view of the animals. The showman must know where the judge is at all times in order to be in the correct position.
3. Make sure your animal is always between the showman and the judge. This ensures that the judge always has the best view of the animal.
4. At all times, keep your movements at the front of the animal. When the judge switches sides, the showman should move around the front of the animal to the correct position.
5. Keep your movement slow and controlled. Your animal can sense your tension and stress. Therefore, if you are upset the animal will react in the same manner. This causes a lot of frustration which can be avoided by remaining calm.

6. Keep your lamb's head straight and upright. This helps make the animal more eye appealing to the judge and can also make your animal appear longer bodied.
7. Set the legs of your lamb squarely underneath the body. This will help to show off body confirmation and muscling.
8. Make sure that your lamb is trained to stand still when the judge handles your animal.
9. Most importantly, SMILE AND HAVE FUN!

Bracing Your Lamb in the Show Pen



Source: Mississippi State University Cooperative Extension

Fair and Show Day

Make sure you arrive at fair as early as you are allowed to give your lamb time to settle in. You may have to provide your own bedding, or there might be bedding already in the pen for your lamb. Keep a close eye on your lamb to make sure it is not eating the bedding. If your lamb eats straw, it could start to have more fill than needed in the belly area. Most pens at the fair are small and your lamb will be spending a lot of time lying in the bedding. To keep shavings or straw out of the fleece, a lamb tube or blanket will be helpful.

If your lamb will be at the fair for several days, make sure to keep an exercise schedule at the fair. Taking your lamb for walks around the grounds is good exercise and will help it get comfortable and relaxed with the show.

Keep your lamb cool and hydrated, since fair season usually falls during some of the warmest times of the year. A fan placed in front of your lamb's pen can help keep it cool if the weather is especially warm.

Feeding your lamb at the show will be a little different than at home. On show day, feed your lamb at least two hours before show time and give it half the amount you usually feed it. Also, provide only half of the water that is usually provided. This will keep your lamb from having too much fill and also keep it alert and attentive. Groom your lamb well so that dust and dirt are removed from the coat and clean the hooves. Be prepared to answer any questions the judge might have for you, such as your lamb's weight, birth date, and how it has been fed and managed.

You must also make sure you have prepared yourself. Wear clean, neat clothes and boots or other sturdy shoes. Carry a small brush or grooming rag in your back pocket. Be courteous to everyone in the show ring and always keep your lamb between you and the judge. Use your rag or brush if you need to smooth the wool or wipe any dirt off of your lamb.

Brace your lamb properly while the judge is handling it. Be sure that all four of its feet are on the ground. Practice bracing your lamb for the judge often at home before fair day.

Fair Checklist:

- Bedding for the pen, if it is not provided.
- Fair Book
- Extension Cords
- Lamb tubes and blankets
- 2 sets of show clothing, in case you get one dirty
- Fan
- Feed trough
- Water Bucket
- Grain and Hay
- Halter
- Hose for washing
- Shampoo and coat preparations
- Pitchfork and broom
- Record Book
- Chairs
- All grooming equipment, including your stand
- Tools (hammer and nails)
- Wire, zip ties and duct tape (all three can serve many practical uses!)
- Health certificate and other necessary paperwork

Remember to:

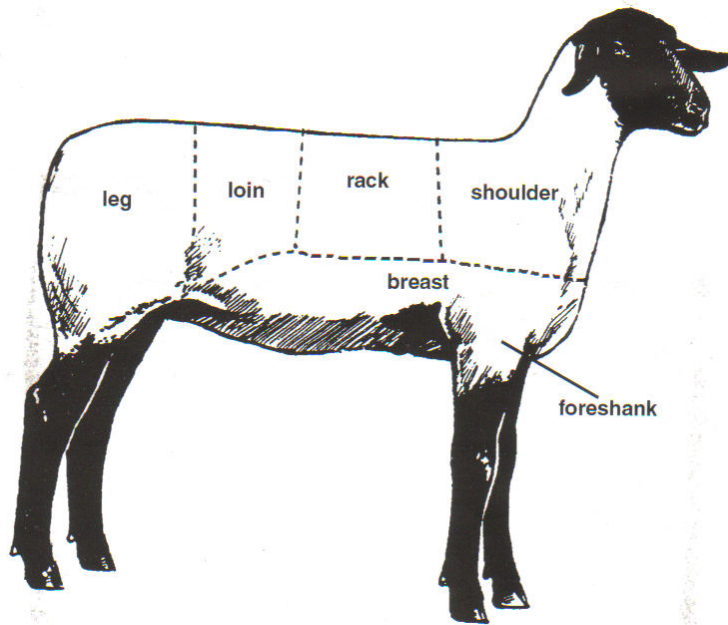
- Keep your pens clean
- Keep your lambs clean
- Feed and water your lamb regularly
- Make sure your lamb isn't too hot. Looks for signs of heat stress like heavy breathing and panting
- Keep your area neat and tidy
- Give yourself plenty of time to prepare yourself and your lamb for the show



The Junior Livestock Auction

A limited number of market lambs will be selected to participate in the Junior Livestock Auction. In most counties, at least Champion and Reserve Champion Market Lambs are selected to sell in the auction. If your lamb is chosen for the auction, make sure you present it the same as you did for the show, and that you are well-dressed. If your lamb is purchased, be sure to write the buyer a thank-you letter in appreciation for their support.

The Final Product



The above illustration shows common cuts of lamb that can be bought commercially. Since there are two sides to the lamb, two of each cut will result when the lamb is processed. Lamb chops come from the loin cut. The pelt of the lamb may also be used to make items such as leather goods and clothing.

Enjoy your market lamb project, and start preparing for next year! Good luck!

Appendix 1 – Sample Budget
Adapted from Colorado 4-H Meat Goat Manual

<u>Fixed Expenses:</u>	
Facilities (New or Improved)	\$
Shelter	\$
Fencing	\$
Panels	\$
Equipment	\$
Feeders	\$
Water Tanks	\$
Miscellaneous	\$
Total Fixed:	\$
<u>Annual Expenses:</u>	
Animals	\$
Veterinary Allowance	\$
Feed	\$
Hay	\$
Grain	\$
Pasture	\$
Show Equipment	\$
Total Annual:	\$
<u>Estimated Income:</u>	
Number animals sold	No. head:
Price	\$/unit
Income from animals	\$
Other income	\$
Total Income:	\$

Appendix 2 – Animal Health Note Card

Adapted from Colorado 4-H Meat Goat Manual

Animal Id.#	Pen Location:	Date:
Temperature:	Coloring:	
Heart Rate:	Sounds:	
Respiration Rate:	Body Fluids:	
Rumen Movements:		
Other Abnormalities:		

Appendix 3-Cuts of Lamb

Wholesale (Food-service) Cuts of Lamb

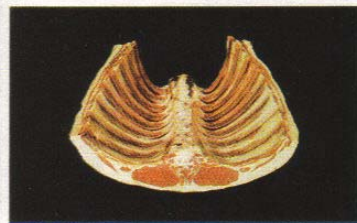
FOODSERVICE CUTS OF LAMB



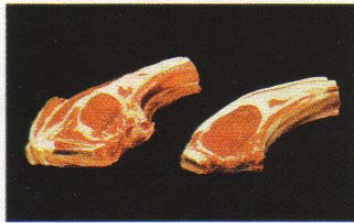
208 Shoulder, Square-Cut, Boneless, Tied



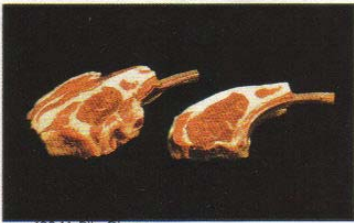
1207 Shoulder Chops



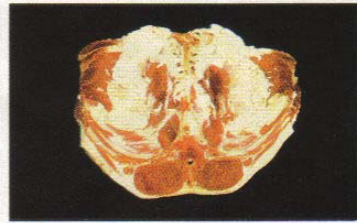
204 Rack



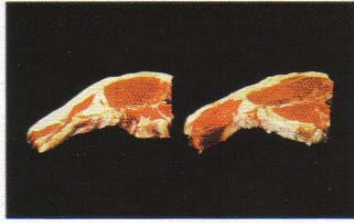
1204 Rib Chops



1204A Rib Chops, Frenched



232 Loin, Trimmed



1232 Loin Chops



233B Leg, Boneless, Tied



234B Leg, Shank Off, Boneless, Tied



210 Foreshank

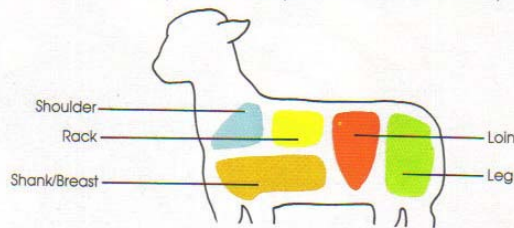


209A Ribs, Denver Style



295 Lamb for Stewing

The above cuts are a partial representation of NAMP/IMPS items. For further representation and explanation of all cuts see *The Meat Buyers Guide* by National Association of Meat Purveyors.



National Association of Meat Purveyors
1920 Association Drive, Suite 400
Reston, Virginia 22091-1547
(703) 758-1900

NAMP/IMPS Number (National Association of Meat Purveyors/Institutional Meat Purchase Specifications)

©1988 National Association of Meat Purveyors



National Live Stock & Meat Board
444 North Michigan Avenue
Chicago, Illinois 60611
(312) 467-5520

Appendix 4-National Animal ID and Meat Quality Assurance

National Animal ID

NAIS (National Animal ID System) is being developed through the integration of three components—premises identification, animal identification, and animal tracking. The long-term goal of the NAIS is to provide animal health officials with the capability to identify all livestock and premises that have had direct contact with a disease of concern within 48 hours after discovery. Please be sure that you meet all state and county requirements for National Animal ID. You may be required to have a premise ID and have your animals tagged with NAIS tags in order to ID your animals for the county fair. As of publishing, RFID tags or Scrapie tags are required to show your market lamb at any county fair in Colorado.

Premise ID, Animal ID tags, and additional information can be obtained from:

<http://animalid.aphis.usda.gov/nais/index.shtml>

Meat Quality Assurance Program

When raising a market animal for Colorado 4-H, you are required to complete a Meat Quality Assurance program. It makes no difference how old you are, or what species of animal you are showing, you are required to attend these programs! Usually each county offers several programs during the 4-H season that are geared towards juniors or seniors. They are usually just a few hours on an evening or Saturday morning. If you cannot attend in your county, you may attend in another county.

The purpose of the Meat Quality Assurance programs is to ensure the consumer that all livestock produced are healthy, wholesome, source verified and meet the food safety standards established by government regulations. In addition best management practices are recommended to improve the health of livestock and to add value to the end product.

Appendix 5-Feeding Worksheet

Use this worksheet alongside page 20 in your manual to help figure out the numbers you should plug into the equations.

Calculate your lamb's average daily gain step by step:

- 1) My lamb weighed _____ (pounds) the last time I weighed it on _____ (date)
- 2) My lamb weighs _____ (pounds) today _____ (date)
- 3) Subtract the weight from #1 from the weight in #2, your answer is _____ (pounds)
- 4) Calculate the number of days between weigh-ins _____ (# of days)
- 5) Divide the answer to #3 by #4, and you have your lamb's average daily gain.

Calculate how much weight your lamb needs to gain by the fair step by step:

- 1) My lamb needs to weight _____(pounds) by the fair
- 2) My lamb currently weights _____(pounds)
- 3) Subtract the weight from #2 from the weight in #1, your answer is _____(pounds)
- 4) How many days are there until the fair? _____(days)
- 5) Divide the answer to #3 by the answer to #4, and you have how many pounds per day your lamb needs to weigh by fair.

Appendix 6-Additional Resources

Market Lamb Terminology provided by Colorado State University

<http://www.ext.colostate.edu/pubs/livestk/01623.html>

MyLamb.com is a market lamb site specific to 4-H and FFA project members.

<http://mylamb.com/>

Market Lamb information and General Sheep Care provided by UC Davis, Irvine

<http://www.ics.uci.edu/~pazzani/4H/Sheep.html>

Selection and Management of 4-H Market Lambs from Purdue University

<http://ag.ansc.purdue.edu/sheep/articles/select.html>

Sheep 101

<http://www.sheep101.info/sheepbasics.html>