

Sand & Sage Round-Up
SHEEP STUDY GUIDE
Senior Division
(14 years and over as of December 31)

You should be able to identify the following breeds of sheep by color and markings of the face, ears and legs.
You should be able to identify which are wool breeds and which are mutton breeds.

Hampshire - ears, face and legs are dark brown/black (meat)
Suffolk - face, ears, lower leg are black and free of wool (meat)
Columbia - face and legs are covered with white hair (wool)
Corriedale - top of head, legs and ears are covered with wool (wool)
South Down - face, ears, legs are light grey to light brown (meat)
Rambouillet - face and legs are white, males may have large horns (wool)
Dorset - face, ears and legs are white and free of wool (meat)

You should know the meaning of the following terms.

Ewe - female sheep
Ram - male sheep
Wether - castrated male sheep
Lamb - young sheep under 1 year of age
Shearing - removing the wool
Crossbred - an animal whose parents were of 2 or more different breeds
Enterotoxemia - overeating disease
Castration - removing male testicles
Yearling - sheep from 1 to 2 years of age
Docking - removing the tail
Alfalfa Hay - a roughage and protein source used in sheep rations
Grain - concentrates used in growing and finishing rations
Predator - coyote or dogs that kill or severely hurt sheep
Wool blind - so much wool on the face that a sheep can not see
Shrinkage - loss of body weight due to stress of handling
Commission - the fee charged for selling an animal
Cutability - percentage of meat in the carcass
Dressing percent - hot carcass weight divided by total animal weight
Expenses - items that you have purchased for your project, such as grain, roughages, feeders, show equipment
Income - dollars that you received from your project, such as prize monies and money from sale of livestock
Profit - when your income is a larger number than your expenses
Loss - when your income is a larger number than your expenses
Breakeven - the price per pound you need to cover your total expenses
Keratitis- pinkeye
Coccidial Dysentery - intestinal disorder
Animal Rights - Protection of animals from any type of exploitation or use such as pets or being used in the fair. Extends human rights to animals.
Animal Welfare - Concern for well being of animals for which a person has responsibility.
Animal Liberation - Animals should not be forced to work or produce for out benefit in any way.
Groups believe we should try to eliminate all types of animal use. These groups consider pets a form of enslavement.

You should be familiar with the Colorado ethical care of sheep guidelines.

You should be familiar with some of the products that are derived from sheep.

You should know how to manage your lamb during the fair:

1. You should respect other people at the fair.
2. You should feed your lamb two times per day at the fair - once before 8:00 a.m. and once between 6:00 and 7:00 p.m.
3. You should clean your pen two times per day, once in the morning and once in the afternoon/evening.
4. You should clean the alley in front of your pens every four hours.
5. You should wash your lamb before the show and before the sale as a minimum.
6. You should not leave your feed trough in the pen after feeding.
7. You should not leave your water bucket in the pen after watering.
8. You should keep your pen gate wired at all times.
9. Check your lamb every 2 hours during the day.
10. Make a plan on how to get to the show ring and market sale ring from the pen.
11. Number of days between spring weigh-in and tagging and the county fair show.

You should know the following things about your lamb before entering the show ring:

1. Breed of your lamb
2. Weight of your lamb
3. Birth date of your lamb
4. Feed costs
5. Beginning weight at tagging
6. Number of pounds gained by lamb
7. Wholesale cuts and parts of the lamb
8. When your lamb was sheared
9. Tag number of your lamb

You should know how to dress for the show ring.

1. Shirt with collar, No tank tops
2. Pants with a belt
3. No cap or hat
4. Hair combed

You should know the water requirements for sheep are 1/2 to 1 gallon of water per day.

You should know the parts of a sheep: (see attached page)

You should know how to figure:

1. The gain of your lamb.
Number of pounds gained = ending weight minus beginning weight.
110 (end wt.) - 63 (beg. wt.) = 47 (total pounds gained)

2. The selling price of your lamb.

Multiply the weight of your animal by the price received per pound.

$$127 \times \$.70 = \$88.90$$

3. How to project your gain on your budget sheet. Multiply the number of days in the feeding period by the number of pounds you think your lamb will gain each day and add the beginning weight to this figure.

Number of days in the feeding period x projected daily gain

$$.75 \times 75 = 56 \text{ pounds}$$

Pounds to be gained + beginning weight = projected ending weight of lamb

$$56 + 60 = 116 \text{ pounds}$$

4. Cost of feed per pound.

- a. You have purchased 300 pounds of feed at .08 (8 cents) per lb. How much did you pay for feed? ($.08 \times 300 = \$24.00$)

- b. You have purchased 400 lbs of feed for \$8.50 per hundred wt. How much did you pay for the feed? What is the cost per pound?

$$\$8.50 \times 4 \text{ (hundred wts)} = \$34.00$$

$$\$34.00 \text{ divided by } 400 = .085 \text{ per pound}$$

5. Interest on money your borrow. You went to your local banker and asked to borrow \$500.00 to purchase your livestock for the county fair. Your banker is going to charge you 12% per year on the \$500.00.

- a. Multiply the total dollars borrowed by the interest rate.

total dollars borrowed	\$500.00
<u>x interest rate</u>	<u>x .12</u>
= interest to be paid	\$60.00

- b. Divide the total interest to be paid by 12 to figure how much interest you will pay each month.

$$\$60.00 \text{ divided by } 12 = \$5.00 \text{ per month}$$

Your lamb should be started on high concentrate rations slowly and feed changes should be made slowly.

You should know the keys to disease prevention. They are: facilities kept clean, vaccination program, balanced diet, fresh clean water, adequate housing and space, predator and rodent control, control of exposure to other species and new animals, and internal and external parasite control.

You should know that you should vaccinate your lamb for enterotoxemia (over eating) and tetanus with clostridium perfringens Type D and tetanus antitoxin at least 10 days before putting them on full feed, and a type D (over eating) booster should be given two to four weeks later.

You should know the minimum lamb weight for the County Fair

You should understand the dentition process for determining the age of sheep.

1. How many permanent teeth does a lamb have? 2 (two)
2. How many teeth does a lamb have? 8 (eight) milk teeth

Did you know that parasites can live inside a sheep or outside under the wool? Common internal parasites are liver flukes, tapeworms, Haemonchus, Ostertagia, and Trichostrongylus. Common external parasites include ticks, keds, and maggots.

You should know some common internal and external parasites of sheep and how to treat them.

<u>Internal</u>	<u>Treatments</u>
Intestinal Worms	Tramisal, hoxon
Stomach Worms	Thiabendazole

<u>External</u>	
KEDS (wingless fly)	Insecticide Dusts

You should know the average feed ratio for sheep and how to figure feed requirements.

1. The average feed ratio is 6 pounds of feed for 1 pound of gain.
2. Multiply the number of pounds your lamb needs to gain by 6 and this will tell you the approximate amount of feed required.
3. How to calculate actual feed to gain ratio if you know the gain and the amount of feed fed.

Pound of Feed
-----= Feed Ratio
Pounds of Gain

You should be familiar with the fact that sheep have a four compartment (rumen, omasum, abomasum, and reticulum) stomach. Their digestive system is similar to that of a cow.

You should know the phases of the Supreme Champion are:

1. Live Placing
2. Record Book
3. Written Test
4. Rate of Gain
5. Showmanship

You should be able to identify grains, roughages, supplements, feed additives, vitamins and minerals.

<u>Feed</u>					
<u>Grains</u>	<u>Roughages</u>	<u>Supplements</u>	<u>Additives</u>	<u>Vitamins</u>	<u>Minerals</u>
Corn	Alfalfa	Soybean	Molasses	A	Calcium
Milo	Grass Hay	Fish Meal	Fat	D	Phosphorous
Wheat	Milo Stalks	Cottonseed Meal	Whey	E	Potassium
Barley					Salt (Sodium
Oats					Chloride)
Rye					

You should be able to figure profit or loss from a given group of items and figures on a lamb project. For example:

Enter the following items and information on the expenses and income page provided and figure a profit or loss and your breakeven.

1. May 20 - you purchased a ram lamb for a total of \$80.00
2. May 22 - you purchase one water trough for \$24.00
3. May 28 - you had the vet castrate your ram lamb for a cost of \$4.00
4. May 30 - you purchased 350 lbs of feed for \$.08 per lb. for a total cost of \$28.00
5. June 4 - you purchased a used feeder for \$20.00
6. June 5 - your water bill was \$5.00
7. June 6 - your interest payments for two months were \$14.00
8. June 8 - you sold your lamb that weighed 125 lbs for \$2.00 per lb.

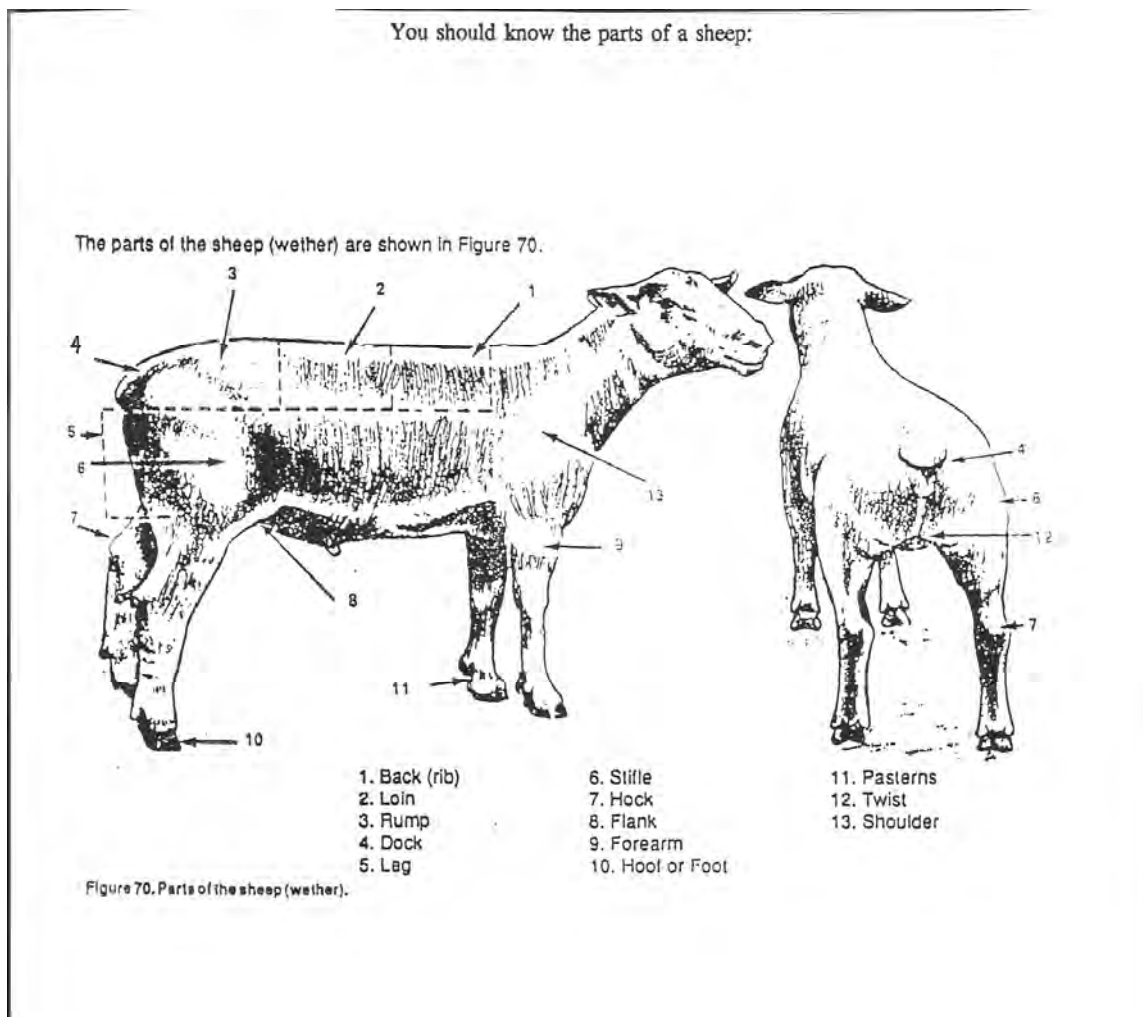
(see attached expense and income page)

How to figure profit or loss:

a. Subtract your total expenses from your total income. If after subtracting you have a positive number, you have a profit; if you have a negative number you have a loss.

How to figure breakeven:

a. Divide your total expenses into your total number of pounds of animal(s).
\$336.00 divided by 500 lbs = .67 cents per pound



OPERATING EXPENSES

Instructions for Operating Expenses

Description of Expenses:

1. Feed and Bedding - All feed and bedding used in the project must be accounted for, even if it is home-grown. Monthly pasture charge for animals on pasture should be listed in this column. Also list salt, mineral, protein supplement, milk replacer, etc.
2. Veterinary supplies - Any medicines or vaccines used for control or prevention of disease should be included as well as veterinarian services.
3. Marketing expense - Should include such costs as commission, brand inspection, sale expense and transportation.
4. Livestock purchased - Cost of animals purchased during the project year should be included here.
5. Miscellaneous expense - Should include such costs as registration fees, electricity, water, fence repairs, building repairs, equipment, show expenses, etc.
6. Labor - Estimate the value of your own labor as well as that of others even if they are not paid directly.
7. Interest - Include the cost of borrowing money as an expense under miscellaneous.

Date	Item Purchased	Quantity	Feed & Bedding	Vet. Sup/Serv	Market Expense	Livestock Purchased	Misc.	Labor
5/20	ram lamb	1				\$80.00		
5/22	water trough	1					\$24.00	
5/28	castration	1		\$4.00				
5/30	feed	350#@8¢	\$28.00					
6/4	feeder	1					\$20.00	
6/5	water	1					\$5.00	
6/6	interest						\$14.00	
TOTALS			\$28.00	\$4.00	-0-	\$80.00	\$63.00	-0-
TOTAL EXPENSE							\$175.00	

INCOME

Record the value of all products sold or used at home and all show premiums.

Date	Kind of Product (used or sold)	Number or pounds	Price per Unit	Total Value	Show Premiums
6/8	ram lamb	125#	\$2.00	\$250.00	
TOTALS				\$250.00	-0-
TOTAL RECEIPTS (add Total Value + Show Premiums)					\$250.00

* Products used at home should be listed at market value.

Profit or Loss = \$ 75.00
(circle one)



COLORADO 4-H ETHICAL CARE OF SHEEP

Before you begin your 4-H sheep project, ask yourself if you are willing to spend time every day caring for your sheep. Sheep need attention, feeding and general care on a daily basis. The successful sheep producer makes a commitment and plans a sheep husbandry schedule for production or care. Be prepared to spend time getting to know your sheep. Make sure your parents support your interest. You will need to work with your adult-volunteer leader, a veterinarian, your local Cooperative Extension livestock agent and a feed supplier.

Housing

Design pens and housing for sheep to prevent injury to the occupants and provide protection from the environment, i.e., sun, precipitation and wind. Provide a minimum of 20 square feet of space per lamb. Pens should be free of sharp edges, nails and protruding wire.

Bedding

Keep the pen or housing facility clean and sanitary at all times. Provide clean, dry bedding. Clean pens as often as necessary depending upon the weather conditions.

Feed and Water

A proper diet for the appropriate production phases of gestation, lactation or growing and finishing, should be available at all times and in proper amounts. Fresh, clean water always should be present in adequate amounts for all animals. Feeders and waterers should be free of manure and other debris. Water and feed should be withheld only during medical treatment and diagnosis or shipping for no more than 24 hours.

Handling

Handling and training are stressful for sheep. Perform these procedures in such a way to minimize stress. Never use electric shock to train a lamb to "brace." Do not beat or use other forms of physical abuse. Do not use excessive, forced exercise through mechanical means.



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Veterinary Care

Administer health medications only according to instructions on the label or under the direction of a veterinarian. Use only drugs approved for sheep. Never exceed the recommended dose unless a veterinarian makes a diagnosis and prescribes a drug at a given dosage for a defined period of time in a valid veterinarian/client/patient relationship.

Routes of administration, whether intramuscular or subcutaneous, should be used according to the label and only with a sterile needle and syringe. Adhere strictly to all drug withdrawal periods. Use of drugs to enhance muscling beyond genetic capability, such as clenbuterol, anabolic steroids and cortisone products, is forbidden.

Remember, use of contraband drugs could result in a Federal Drug Administration investigation and possible prosecution. Each animal should have a unique identification to which you refer when drugs are administered to avoid errors. Keep records for all drugs administered. Include date, animal identification, drug, amount and route of administration. Include the veterinarian's name in the record when a veterinarian attends an animal. Practice good preventive measures, such as vaccinations and parasite control.

Transportation

Trucks and trailers should be of sufficient size to accommodate all occupants safely, provide secure footing, be in good repair and provide protection against the elements. A 12-hour fast before shipping is recommended for easier handling of the animals and better sanitation on the truck.

Showing

Lambs will be rejected from shows if they have the following diseases or for the following reasons:

- skin—any fungal lesions,
- eyes—any symptoms of pink eye,
- mouth—sore mouth (orf) lesions,
- feet—footrot,
- injuries (traumatic lesions), i.e., dog bites, broken bones and so forth,
- withholding feed and water any time when the animal is physically on the show or fair grounds,
- dirty or unkept stalls or pens, and
- any observed use of drugs other than those authorized for use by a veterinarian or show official.



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Sheep Products Find Many Uses

While providing a continued supply of red meat to the tables of American consumers, sheep and lambs also provide significant by-products used by a number of American industries. These by-products are used in the manufacturing of many consumer items which are enjoyed by and contribute to the health and convenience of people from all walks of life.

■ From Hide and Wool

Lanolin
Clothing
Drum Heads
Yarns
Artists' Brushes
Sports Equipment
Fabrics
Pelt Products

Rouge Base
Insulation
Rug Pads
Asphalt Binder
Textiles
Ointment Base
Tennis Balls
Worsted Fabric

Felt
Carpet
Footwear
Woolen Goods
Baseballs
Upholstery
Hide Glue
Paint and Plaster Binder

■ From Fats and Fatty Acids

Explosives
Solvents
Chewing Gum
Paints
Makeup
Rennet for Cheese
Industrial Oils
Industrial Lubricants
Stearic Acid
Cosmetics
Dog Food
Protein Dog Food
Mink Oil
Oleo Margarine
Ceramics
Medicines
Shoe Creme
Dish Soap

Tires
Paraffin
Chicken Feed
Biodegradable Detergents
Antifreeze
Crayons
Floor Wax
Tallow for Tanning
Chemicals
Rubber Products
Oleo Shortening
Insecticides
Candles
Herbicides
Shaving Cream
Protein Hair Conditioner
Protein Hair Shampoo
Creams and Lotions

■ Retail Meats

Leg of Lamb
Pot Roasts
Lamb Chops
Round Steaks
Rack of Lamb
Ground Lamb
Lambecue
BBQ Ribs

■ From Intestines

Sausage Casings
Instrument Strings
Surgical Sutures
Tennis Racquet Strings

■ From Manure

Nitrogen Fertilizer
Potash
Phosphorus
Minor Minerals

■ From the Bones, Horns and Hooves

Syringes
Gelatin Desserts
Rose Food
Piano Keys
Marshmallow
Potted Meats
Pet Food Ingredients
Bandage Strips
Bone Charcoal Pencils
Gelatin Capsules
Adhesive Tape
Photograph Records
Combs and Toothbrushes
Buttons
Abrasives
Bone Jewelry
Bone Meal
Emery Boards and Cloth
Ice Cream
Laminated Wood Products

Horn and Bone Handles
Collagen and Bone for Plastic Surgery
Bone China
Wallpaper and Wallpaper Paste
Dog Biscuits
Steel Ball Bearings
Malts and Shakes
Fertilizer
Neatsfoot Oil
Adhesives
Bone Charcoal for High Grade Steel
Plywood and Paneling
Shampoo and Conditioner
Dice
Collagen Cold Cream
Crochet Needles
Cellophane Wrap and Tape
Glycerine
Photographic Film

Americans Appreciate

Sheep Products

Sheep by-products are used in places most American consumers wouldn't think to look. In fact, many people couldn't get through the day without sheep and other animal products. Getting up and dressed in the morning utilizes lanolin. Where would America be without mouthwash, soap, deodorant, and of course, gel? Not to mention lotion, cosmetics, perfumes and hair spray. Moving on to breakfast, if consumers are the type that eat on fine bone china, that comes from sheep, too. Bone tissue is ground to make the necessary ingredients for some of the world's finest china. If they check their purse or wallet, it's quite possible it's made from sheep leather. On a cold day they may even need to put on their wool-lined gloves and jackets before leaving the house. Of course, many pants, suits, sweaters, socks, ties, shirts, underwear, skirts, blouses and other types of clothing are made of wool.

Driving to work also involves sheep products. Many drivers sit on sheepskin in seat covers for comfort. If consumers have a really nice car with leather upholstery, it came from animals and some of them may be sheep. In addition, stearic acid obtained from the animal's fat is added to car tires to make them run cooler. Glycerol, another animal-based chemical, is found in brake fluid and glycerol is one of the main ingredients to make asphalt stick together. If they listen to the radio on the way to work or take in a concert later in the evening, they are hearing sheep in action. Sheep by-products are used to make strings for instruments such as violins and heads for drums.

Sitting down to dinner by candlelight includes sheep. Tallow candles are kind of messy, but they're the real thing, and they're made from sheep. Modern candles use stearic acid and paraffin which also come from sheep. Serving wine and cheese before dinner is nice and the cheese is available because of the sheep rennet to make it. The fancy carving set for the leg of lamb comes from horn and bone tissue, and softening agents in baked goods, as well as plasticizers in shortening, are made from sheep by-products. Desserts like ice

cream and chocolate American consumers decide to photograph a memorable evening, they will again be using animal gelatin processed into photographic film.

Chewing gum to "freshen your breath" after dinner utilizes fatty acids from sheep.

If spending the evening by candlelight doesn't thrill the consumer, sporting events abound. With baseball season upon us, it seems only appropriate to consider the contribution of sheep to one of America's favorite pastimes. Hot dogs are cases in sheep intestines and the ball is stuffed with wool. It's also sewn with wool thread. The rubber lining is made with stearic acid and the cork center contains processed blood. Sheep couldn't get more American if they tried.

For Americans who are not feeling well, sheep provide cough medicine, insulin, pepsin, spinaephrine, ACTH, cortisone, hormones, glandular extracts, suppositories and surgical sutures made from intestines. Animal cartilage also is used for orthopedic reconstruction and other animal products serve as protective media for freezing red blood cells, sperm cells, eye cornea and other living tissues.

Americans who entertain in their Southwestern-style homes also have sheep and sheep producers to thank. They supply skulls, bones and other animal parts for sculpture and home decoration. Bones are used for jewelry, including earrings and tie-tacks. A sheep's bones alone can bring as much as \$110. Other decorations provided by sheep help create an aura in a home. Navajo-style wool throw rugs add warmth and elegance to the room as do pelts and paint. Carpeting is also a nice touch, especially durable wool blend carpet which utilizes more than 1.7 billion pounds of wool a year. Adobe brick, which surrounds the outside of authentic Southwestern-style homes, is made with glycerin, also derived from animal fat. Concerned, label-reading American consumers can see that animal products are all around us, in our cars, food and homes. Even if we became vegetarians, we would still rely heavily on animal by-products. Perhaps in the future, synthetic materials will be developed to

replace them. But even if those have been developed, there is nothing like the "dyed in the wool real thing."

