

MN 2000

FHM-119

4-H M119

1978

MINNESOTA SHEEP LEADER'S GUIDE

AGRICULTURAL EXTENSION SERVICE, UNIVERSITY OF MINNESOTA



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4-H M119 MINNESOTA SHEEP LEADER'S GUIDE

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Sheep, purebred or commercial, make an excellent project for the 4-H member.

TEACHING ANIMAL SCIENCE LESSONS

Why Teach Youth?

As a leader, you are helping boys and girls develop trained minds, sound bodies, skilled hands, and good citizenship attitudes.

By teaching lessons, you will be helping young people appreciate the value of research and learn scientific methods of making decisions and solving problems.

A recent study on the present status of science in the 4-H meat animal livestock program found that: "Project information is based on research; therefore, members are applying the results of science. However, most members are not aware of the science involved in their projects. The work of scientists or results of research are seldom mentioned in the publication. The attempts to stress science in livestock projects are rather isolated and most have not been followed through." Science in 4-H Study, National 4-H Foundation.

I. PURPOSES OF THE 4-H SHEEP PROJECT ARE TO:

- A. Learn how to select and raise sheep.
- B. Learn about the management practices necessary for sheep production.
- C. Learn the skills of owning, caring, and assuming responsibility for sheep.
- D. Learn about feeding, insect and parasite control, and management of sheep.
- E. Learn about cost, return, marketing, and record keeping.
- F. Learn how to prepare the lamb for the family.
- G. Practice good sportsmanship in competitive events.

II. SHEEP PROJECTS AVAILABLE

Ewe Flock

Project objectives are to:

1. Learn how to manage a flock of ewes for profitable lamb and wool production.
2. Study the nutrition of a producing flock.
3. Study lamb production systems:
 - Early lambs reared exclusively in drylot.
 - Late lambs:
 - Lambs on pasture with ewes, weaned early, and finished on separate pasture or in drylot.
 - Lambs in drylot, ewes pastured and brought in to nurse lambs twice per day.
 - Ewes and lambs in drylot.
4. Study income potential from a well-managed flock.
5. Learn how to develop a more productive flock through:
 - Performance testing and record keeping.
 - Breeding.
 - Crossbreeding.
 - Use of new breeds, i.e., Finnsheep.
6. Study lamb finishing rations.
7. Learn parasite control methods.
8. Learn to produce desirable quality lamb carcasses by participating in exhibitions which include carcass evaluation.

Single or Multiple Ewe Lamb Project

Project objectives are the same as for the ewe flock with this addition:

9. Learn how to grow and develop ewe lambs that will make valuable additions to the producing flock.

Single or Multiple Wether Project

Project objectives are the same as for the ewe flock project.

Feeder Lamb Project

Project objectives are to:

1. Learn how to finish 60- to 80-pound feeder lambs through:
 - Learning how to put new lambs on feed.
 - Studying energy, protein, mineral, and vitamin requirements.
 - Learning about cost, return, marketing, and record keeping.
 - Studying income potential from this enterprise.

Sheep Project — Without A Lamb

This project is for 4-H members who do not have the facilities to keep a lamb but would like to learn about sheep production and lambs.

POSSIBLE PROJECT IDEAS

Project members can:

1. Learn the history and characteristics of the different lamb breeds. Materials are available from various purebred breed associations. A notebook or display could be prepared. A demonstration could be presented.

2. Make several visits to one or more sheep facilities (farm, research station, etc.) to observe birth and development of the lambs and the management practices employed during various production phases. These visits should begin about February 1. During the visits, members should talk with the managers and learn all they can about feeding and management practices.

Members can take interesting pictures while at the facility or cut pictures from magazines which show or demonstrate the various things observed during the visits. With these pictures, prepare a booklet which describes sheep production. Comments should be included under each picture.

3. Tour some sheep industry facility such as a feed mill, packing plant (including a direct or terminal market), sheep equipment manufacturer, or purebred breed sale.
4. Record information on at least 15 retail lamb products sold in a local grocery store. The information will include where these cuts originated on the carcass, price per pound, and number of servings per pound. Obtain recipes for preparing a minimum of three retail cuts.

Members can prepare an exhibit of pictures from magazines or photographs of the various cuts of meats and/or prepared lamb dishes.

5. Give 4-H demonstration illustrating the parts of the lamb carcass, the value of lamb in the diet, the preparation of a lamb dish recipe, or other subjects.
6. Visit the local store or have a meat merchandiser present a talk on lamb cuts, their location, and preparation.

7. Tour a meat processing or locker plant and observe the cutting and preparation of lamb products.
8. Take a wool project. This might include studies or tours relating to types and grades, marketing, processing, utilization of wool and wool products.

III. GOALS

Members should set goals each year so they work toward something challenging each year.

Beginning member (1 to 2 years in project)

Project goals are to:

1. Feed and care for lamb by yourself.
2. Keep an accurate record of feed fed and cost.
3. Treat lambs for worms and ticks.
4. Have feet trimmed and lambs sheared.
5. Learn correct names for parts of lamb.
6. Show the lamb, if you chose (this means learning about showmanship).
7. Give a demonstration.

Intermediate (3 to 4 years in project)

Project goals are to:

1. Enroll in two lamb projects or take the multiple lamb project if possible.
2. Take complete responsibility for care of ewes and flock.
3. Try to save all lambs born alive.
4. Learn how to feed and manage a small flock of sheep if possible.
5. Study the economics of sheep raising.
6. Show the lambs, if possible (learn good showmanship techniques).
7. Enter lambs in carcass contest and learn how carcass is evaluated.
8. Attend judging sessions if offered in your county.
9. Teach some simple techniques to younger members.
10. Give a demonstration.

Advanced (over 5 years in project)

Project goals are to:

1. Have a multiple project if possible.
2. Develop a plan and budget for project.
3. Personally select the rams and ewes for your project.
4. Try a new idea in raising sheep each year.
5. Attend judging sessions.
6. Enter a carcass contest and learn how carcasses are evaluated.
7. Teach sheep management to others.
8. Give a demonstration.

IV. LESSON IDEAS

This section is broken into major subject matter areas according to the experience of the member. It should give you some ideas of important areas the members should learn. Extension folders, bulletins, and fact sheets are available from Bulletin Room, 3 Coffey Hall, 1420 Eckles Avenue, University of Minnesota, St. Paul, MN 55108.

GENERAL

BEGINNER GENERAL SESSION

Sheep Are Good To Us

Help members to:

1. Learn that sheep provide meat, clothing, furs.
2. Encourage the use of these products.

INTERMEDIATE GENERAL SESSION

Sheep and the Environment

Help members to:

1. Become aware of the compatibility of sheep and the environment.
2. Realize that sheep can save energy and use resources that would otherwise go unused.

ADVANCED GENERAL SESSION

Sheep as a Business

Help members to:

1. Budget a sheep enterprise.
2. Learn what the inputs are and their costs.
3. Learn what returns from a sheep enterprise are.
4. Analyze a sheep enterprise as a viable business or career opportunity.

MATERIALS TO USE:

- Sheep Manual
- Material from Wool Growers
- Material from National Lamb Producers
- Film: Story of Wool
Sheep Shearing

THINGS TO DO:

- Study various grades of wool.
- Study by-products of sheep.
- Visit feed dealers.
- Figure interest costs.
- Calculate cost to produce lamb.
- Calculate cost to keep ewe and ram.
- Calculate cost to produce market lamb.
- Calculate depreciation.
- Estimate marketing costs.
- Calculate cost per pound of gain.
- List inventory.

NUTRITION

BEGINNER NUTRITION, FEEDING

Feeding A Lamb

Help members to:

1. Become familiar with the broad classes of feeds, i.e., grains, roughages, supplements.
2. Know the feeds commonly fed to lambs in their community.
3. Associate weights and measures of feeds.
4. Appreciate the importance of following good feeding practices.

INTERMEDIATE NUTRITION, FEEDING

Feeding A Lamb Right

Help members to:

1. Learn the approximate amounts of different feeds that lambs need and will eat.
2. Learn that lambs need nutrients and which are the most important ones.
3. Learn how to determine if they are feeding a lamb the right kind of and enough feed to supply the protein requirements.
4. Evaluate their own feeding skills and practices.

ADVANCED NUTRITION, FEEDING

Feeding A Ewe Right

Help members to:

1. Be aware of the different stages a ewe is in during a year.
2. Associate these stages with the kind and amount of feed to be fed.
3. Develop knowledge and skills associated with feeding ewes.
4. Develop skills associated with balancing rations and meeting nutrient requirements.
5. Evaluate rations they are feeding.
6. Develop an appreciation of some scientific concepts of nutrition.

MATERIALS TO USE:

- Sheep Manual
- Folder 308 Young Lamb Nutrition and Management
- Folder 403 Urea and Other Non-Protein Nitrogen Compounds
- Folder 405 Mineral Requirements
- Folder 345 Feeding The Ewe Flock

THINGS TO DO:

- Balance a ration.
- Formulate a lamb ration.
- Formulate a ewe ration.
- Formulate a ram ration.
- Creep-feed lambs.
- Flush ewes.
- Study mineral and vitamin sources.

- Study milk replacers.
- Study factors affecting water intake.
- Study effects of nutrition on wool production.
- Build or repair feeders, chutes, fences, shelters.

BREEDING

BEGINNER BREEDING

Choosing A Lamb

Help members to:

1. Learn the economically important traits in sheep.
2. Learn that there are several methods that can be used in selection, i.e., visual appraisal, records, etc.
3. Improve their skills in selecting a lamb.

INTERMEDIATE BREEDING

Deciding What Ram to Breed to What Ewes

Help members to:

1. Learn and apply the concept of selection for economically important traits.
2. Learn about the strengths and weaknesses of different adapted breeds.
3. Understand the principle of variation i.e., some good, some average, some poor individuals, in each flock or breed.

ADVANCED BREEDING

Improving A Commercial Ewe Flock

Help members to:

1. Understand how inheritance works.
2. Learn the concept of hybrid vigor or heterosis.
3. Learn the concept of heritability.
4. Determine the basis for selection of a ram and of ewes.
5. Plan a breeding program for a typical commercial producer in the community.

MATERIALS TO USE:

- Sheep Manual
- Folder 307 Selecting a Profitable Breed of Sheep
- Slides: Sheep Judging
Culling Sheep
Breeds of Sheep

THINGS TO DO:

- Judge sheep.
- Visit producers of various breeds.
- Study pedigrees.
- Keep production records.
- Keep growth rate records.
- Use a record keeping system.
- Study sheep magazines.
- Determine age of sheep.

- Design crossbreeding program.
- Study mating system.

REPRODUCTIVE PHYSIOLOGY

BEGINNER REPRODUCTIVE PHYSIOLOGY

Rams + Ewes = Lambs

Help members to:

1. Become familiar with the proper names of the parts of rams and ewes that are involved in reproduction.
2. Learn what the main function each of the above performs in reproduction.
3. Become acquainted with scientific reproduction terms.
4. Learn and be able to make practical application to the reproductive cycle, i.e., estrus season, length of estrus cycle, duration of estrus, usual time of ovulation, length of gestation, age to puberty.

INTERMEDIATE REPRODUCTIVE PHYSIOLOGY

The Wonder of a Newborn Lamb

Help members to:

1. Become familiar with the birth of a lamb.
2. Become familiar with a "normal birth."
3. Become familiar with the water bag, the after-birth, and the navel cord.
4. Become acquainted with how a lamb starts to breathe and live on its own.

ADVANCED REPRODUCTIVE PHYSIOLOGY

Helping the Ram and Ewe do Their Jobs

Help members to:

1. Become familiar with the practices that will help make the ram more fertile.
2. Learn methods of evaluating fertility in the ram.
3. Become familiar with the practices that will increase ewe reproductivity.
4. Evaluate the reproductive efficiency of their flocks or the flocks in the community, i.e., ewe lambing of ewes bred, lambs living to 2 weeks of age, lambs marketed or raised to 5 months.

MATERIALS TO USE:

- Sheep manual
- Folder 309 Avoiding Lambing Season Problems
- Folder 345 Feeding the Ewe Flock

THINGS TO DO:

- Examine a pregnant ewe.
- Learn about lambing difficulties.
- Fertility test rams.
- Keep a flock record system.
- Study reproduction using pictures of parts.
- Study reproduction habits.
- Study various parts of the reproduction system.

MANAGEMENT

BEGINNER MANAGEMENT

Every Good Sheepman Knows How To:

Help members to:

1. Learn indicators of a sick sheep.
2. Learn how to catch a sheep and hold a lamb.
3. Learn how to dock and castrate a lamb.
4. Learn how to trim feet.
5. Learn how to tie a fleece.

INTERMEDIATE MANAGEMENT

The ABC's of Lamb Care

Help members to:

1. Learn that lambs need food, water, shelter, exercise.
2. Learn the consequences of poor care.
3. Learn and follow good feeding and watering practices.
4. Learn what desirable shelter and environment is for lambs and to provide it.
5. Evaluate the care they are giving their lambs.
6. Know what is a normal, healthy, well-cared-for lamb and the signs of a poorly cared for lamb.
7. Learn why identification is important and methods of identification.

ADVANCED MANAGEMENT

Practices Requiring More Skill That Good Sheepmen Follow

Help members to:

1. Know how to properly drench a lamb or ewe and why it's important.
2. Learn procedures to follow in crotching, facing, and shearing.
3. Learn how to vaccinate under the skin and in muscle tissue and to care for syringes and needles.
4. Equip a medicine chest for sheep.
5. Know how to assist ewes having lambing difficulties.
6. Control external parasites.
7. Learn how to sort lambs for market.

MATERIALS TO USE:

- Sheep manual
- Folder 308 Young Lamb Nutrition and Management
- Folder 306 Economics and Management Considerations
- Folder 309 Avoiding Lambing Season Problems
- Film: Sheep Shearing
- Slides: Sheep Hoof Trimming

THINGS TO DO:

- Recognize a normal animal.
- Show way of identifying animals.
- Learn to give vaccinations.

- Visit the veterinarian.
- Learn to dock and castrate.
- Learn to treat hoof rot.
- Develop a sanitation plan.
- Learn about winter and spring lambing programs.
- Treat bloat.
- Study control of parasites.
- Determine source of death.
- Learn how to shear.

MEAT

BEGINNER END PRODUCT, MEAT

The Meat-Type Lamb

Help members to:

1. Learn the desirable characteristics of lamb carcasses.
2. Relate these to live lambs.
3. Develop skills in evaluating live market lambs.

INTERMEDIATE END PRODUCT, MEAT

Lamb Is Good

Help members to:

1. Taste lamb.
2. Learn how to charcoal broil lamburger.
3. Develop a positive attitude toward lamb as a meat.

ADVANCED END PRODUCT, MEAT

The Story Of A Lamb Carcass

Help members to:

1. Learn the names of parts of the lamb carcass.
2. Learn the major retail cuts and where they come from.
3. Appreciate that a lamb carcass is not all lamb chops or lamb leg.
4. Appreciate what a retail store does in processing and merchandising.
5. Learn what, where, and how carcass measurements are taken.

MATERIALS TO USE:

- Sheep Manual
- Recipe books
- Materials from National Lamb Council
- ASFS 12 Lamb Carcass Quality and Yield Grades Standard
- Slides: Evaluation of Lamb Conformation Grades #679
Lamb Evaluation #529

THINGS TO DO:

- Hold a cookout using lamb products.
- Hold a cook-off contest for best recipes.

- Visit a grocery store.
- Judge lamb.
- Inspect lamb.
- Slaughter a lamb, cut up carcass.
- Identify retail cuts.
- Study what carcass measurements are used to evaluate lamb carcass shows.

WOOL

BEGINNER END PRODUCT, WOOL

Wool Is Not All The Same

Help members to:

1. Learn how wool is classified or graded.
2. Develop skills in evaluating wool.

INTERMEDIATE END PRODUCT, WOOL

Wool Is Tops

Help members to:

1. Feel raw wool and clothing made of wool.
2. Learn the characteristics of wool that make it desirable.

ADVANCED END PRODUCT, WOOL

From Fleece To Fabric

Help members to:

1. Learn how a sheep produces wool.
2. Learn the manufacturing process from wool fleece to fabric.

MATERIALS TO USE:

- Folder 307 Selecting a Profitable Breed of Sheep
- Materials from Wool Growers
- Fiber—Story of Wool

THINGS TO DO

- Visit a wool processing plant.
- Watch a sheep shearer.

- Learn to tie wool.
- Learn various grades of wool.
- Learn how various lengths of fleece are used.

ALL PROJECTS

Showing

Help members to:

1. Develop an attitude of positive sportsmanship.
2. Learn to show the animal to its best advantages.
3. Introduce new ideas in showing sheep.

MATERIALS TO USE:

- Sheep Manual
- Slides: #913—Fitting and Showing Sheep
#5 —Sheep Judging
—Sheep Hoof Trimming
- Films: #3679—Your Lamb Goes to the Fair

THINGS TO DO:

- Trim feet.
- Practice showing.
- Conduct a lamb lead.
- Card and trim fleece.
- Build a trimming stand.
- Attend shows and watch showmen.
- Learn how to enter sheep accurately.

These are only ideas of areas within the project that can be taught. It is very important that you as a leader find out what the members know and help them learn from there. The lessons can be taught or presented in many ways. There are many people who would be willing to help you, if you just ask.

The main thing is to meet with the youth as soon as you know they are taking the project. Develop a time schedule with them as to what needs to be taught and at what time of the year.

Check with other special areas. Could you work on some of the sessions together?

LEADER'S TEACHING OUTLINE

Introducing Animal Nutrition

TEACHING OBJECTIVES

Help members to:

- a. Understand animal nutrition is a science.
- b. Know the anatomy of the digestive tract of beef, sheep, and swine.
- c. Understand the essential function of the different major organs of the digestive system.
- d. Understand some reasons why cattle and sheep nutrition are different from swine nutrition.
- e. Know nutrition terms.
- f. Learn more about the principles involved in feeding.

WHAT IS TO BE PRESENTED

- a. Learn the definition of terms related to nutrition.
- b. Study the digestive tract and learn functions of the various parts of the tract for the swine, sheep and cattle. Learn the difference between the two types.
- c. Learn why knowledge of the digestive system is important for the producer to know as he plans his feeding programs.

HOW WILL IT BE PRESENTED

- a. Have the members study the digestive system of animals in their manuals. Give them some questions to answer relating to the material in the manual.
- b. Use the slide set "Roaming Through the Rumen" and discuss this. If possible, get some digestive tracts of swine, cattle, chickens, or rabbits from a local farmer in the area.
- c. Discuss parts of the digestive system and how each functions.

EVALUATION

- a. Have drawing made of the digestive system of swine and cattle and ask youth to label the parts and to give their functions.
- b. Give a simple quiz on the meanings of appropriate terms.