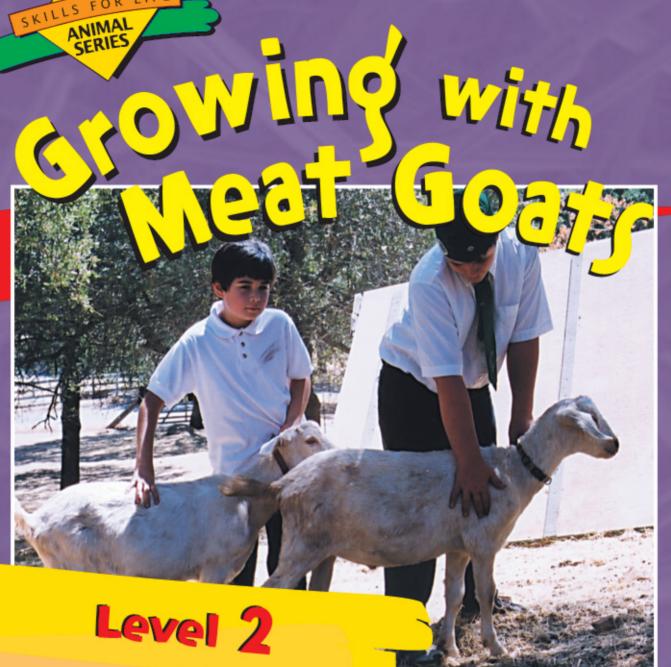
National 4-H Curriculum BU-07910



Meat Coat Activity Guide

Name		

County _____



Note to the Helper

I f you were a project helper for one or more youth involved in completing Meat Goat 1, *Just Browsing*, you know what a great experience this important role is. As a helper, you are in a perfect position to help youth grow and develop in positive ways as they learn about meat goats and about themselves. You can nurture and cultivate their interest in this project by guiding their planning, helping them carry out their projects, and recognizing them for a job well done.

Your Role

- Become familiar with the material in this activity guide and the Meat Goat Helper's Guide
- Support youth in their efforts to set goals and complete each Achievement Program
- Date and initial the activities on the Meat Goat Achievement Program as they are completed and the two of you discuss them
- Help youth to get to know themselves, including their strengths and weaknesses
- Encourage the use of the experiential learning cycle described on this page

The Meat Goat "Skills for Life" Series

This guide, Growing with Meat Goats, is the second in the series of three for youth that also includes Meat Goat 1 Just Browsing, Meat Goat 3 Meating the Future and the Meat Goat Helper's Guide. The three youth guides have been designed to be developmentally appropriate for grades 3–5, 6–8 and 9–12 respectively, but may be used by youth in any grade based on their project skills and expertise.

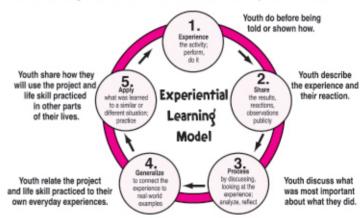
All activities in the guides have several parts: a description of the skills to be practiced; discussion questions; suggestions for additional activities; and additional helpful information. The success indicator listed for each activity is an excellent way to evaluate the youth's success. Each of the guides also includes an Achievement Program to encourage youth to learn more about goats while developing important life skills. In the *Helper's Guide* you will find another evaluation piece titled "Evaluating the Impact." Complete this before the youth begins each level and after completing each level.

Each activity is designed so the young person has an opportunity to learn by doing before being told or shown how. Your challenge is to stay in the background while the youth explores the activity and learns from the experience, even when it doesn't work the way it's expected to. You can most effectively help with the learning by listening as the young person considers the questions and draws conclusions. At times the activity may call for you to be a resource person for content or ideas.

The fourth publication in this series, Meat Goat Helper's Guide, provides additional learn-by-doing activities that can be adapted to the family, the classroom, after school programs, 4-H project groups, clubs or other groups. You'll also find helpful hints about characteristics of youth, life skill development, teaching experientially, meeting ideas as well answers to many of the activities in the youth guides.

Experiential Learning Model

This five-step model is included in each activity in this series:



Pfeiffer, J.W., & Jones, J.E., "Reference Guide to Handbooks and Annuals" © 1983 John Wiley & Sons, Inc. Reprinted with permission of John Wiley & Sons, Inc.

As you can see, the youth first attempt the activity without assistance. After the youth do as much as they can, you then meet together and discuss what they did, what was important about what they did, how what they did relates to their lives, and how might they use the life and project skills practiced in the future. Sample questions are included following each experience. Your ability to ask additional thought-provoking questions and to clarify and expand the youth's ideas will add to the educational experience.

Good luck in your role as Project Helper and thanks for contributing to the positive development of our youth.

Acknowledgements

SFOR

ANIMAL

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What's Inside?

What's Inside?

Note to Duck -

For more on meat goats, look for these other guides in this set.

Level i Just Browsing

Chapter 1 Selection

Name That Part!

Choosing Wisely

Kikos and Premies and Boers-Oh My!

Chapter 2 Marketing and Products

We Can't Have Quality Without "U"!

Meat or Milk?

Re a Sport

Chapter 3 Hoalth and Dispaso

Ding Dong Bell, Is That Kid Feeling Well?

Chapter 4 Feeds and Nutrition

I'm Stuffed

Ruminate on This!

Chapter 5 Husbandry of Animals and Resources

Goat Cribs Making Kid Cents into

Big Bucks

Learning the Ropes Meat Goat Talk 1 (Glossary) Meat Goat Resources



Level 3 Meating the Future

Chapter 1 Health and Disease

As the Worm Turns

The War on Germs Chapter 2 Selection

Behind the Scenes

Talk the Talk

Who's Your Duddy? Chapter 3 Foods and

Nutrition
It's a Balancing Act
In Search of Greener
Pastures

Chapter 4 Hughandry

of Animals and Resources Is That Ethical? This Land is Your Land

Fe-i-Fe-i-Oh!

Chapter 5 Reproduction

Chapter 6 Marketing and Products

Getting Market Savvy Meat, Milk, and More Meat Goat Talk 3 (Glossary)

Meat Goat Resources

Helper's Guide

Youth Learning Characteristics Developing Life Skills Teaching and Learning Experientially Chapter 1 Planning and Organizing

All Gosts Are Not Created

Chapter 3 Games and Activities

Let Me Tell You All About It!

Believe It or Not?

Better Living with a Couple of Bucks and Lots of Doe

Chapter 5 Developing Character

Accepting the End





Looking Ahead

Chapter 2 Project Skills What's On Your Calendar?

Equal

Plate It Safe

Learning Doesn't Have to Be "Boer-ing!" Skillathon Time!

Going On the Road

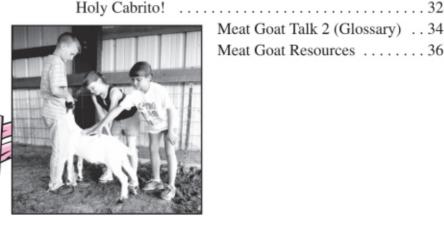
Chapter 4 Time to Think

On the Path to a Career

Helping Animals Fa







Chapter 1 Health and Disease Is Your Wether Under the Weather?
Chapter 2 Selection Choosing Your Genes
Chapter 3 Feeds and Nutrition Mares Eat Oats and Does Eat Oats and Sometimes Toxic Plants!
Chapter 4 Husbandry of Animals and Resources The Scoop on Poop
Chapter 5 Reproduction 23 AndACTION! 23 The Birds and the Bees 24 No Kidding Around! 26 I Kid You Not 28
Chapter 6 Marketing and Products 'Round the Ring and Back Again

Note to Project Helper Inside Front Cover

Meat Goat Talk 2 (Glossary) . . 34

Meat Goat Resources 36

Having Fun As You Learn About Meat Goats

Let's Get Started.

This guide is an important part of the meat goat project. Meat Goat 2 offers you new challenges and opportunities to explore a wide range of activities related to goats. You'll also have fun meeting new people, becoming better acquainted with your community, and expanding your interests and goals. Like Meat Goat 1, an Achievement Program is included to guide your efforts and provide you with an opportunity to be recognized for meeting your goals. Here are some of the many activities you can choose to do:

- · Select a veterinarian
- Create flashcards about goat diseases
- Learn about body condition scoring
- Inventory the types of plants on your property
- Develop a predator control program
- Determine breeding dates
- Design a manure management program
- Devise a record keeping system for kidding
- Create a Web page or poster about goat reproduction
- Fit a goat for a show
- Conduct goat meat market research
- Create a weight tape
- Construct a model of a soil profile
- Select breeding animals
- Travel with a veterinarian for a day
- Make a scrapbook of toxic plants

Meat Goat 2 Project Guidelines

- · Set your goals and record project highlights.
- Do a minimum of seven activities in Level 2
 of the Growing with Meat Goats Achievement Program
 each year and complete the program within three years.
- Participate in a minimum of three learning experiences listed on the planning guide each year.
- Practice and develop the life skills of keeping records, making decisions, self responsibility, marketable skills, and others.
- · Increase your goat knowledge and skills.

Achievement Program

While you are having fun doing the activities, you'll also be completing Level 2 of the *Growing with Meat Goats* Achievement Program. A level is included in each of the goat project activity guides. This program will help you set goals, record your successes and be recognized for your hard work.

Your Project Helper

On your team supporting you and making learning more fun is your project helper. This person may be a parent, goat breeder, project leader or advisor, a neighbor, or an older friend who knows about goats. The choice is yours. As you do the activities, discuss with your helper what you did and answer the questions in the "Ruminations" part of each activity. Sometimes your helper will work with you to identify resources, including people, Internet sites, organizations, events, magazines, and books necessary to complete an activity. Once you have successfully completed each activity, your helper will date and initial your Achievement Program.

Write the name, phone number and E-mail address of your project helper here:

T. C.	My Project Helper: _ Phone: E-mail:	
		Good Luck with Meat Goat 2 — Growing with Meat Goats

Planning Guide

Project Goals

Name:	
My goat's name or number:	
Breed:	
What I want to do and learn in Meat Goat 2:	
I.	
2.	
3.	
4.	

Learning Experiences

Complete at least three of these activities each year.

Year	Year	Year	Activity	
			Give a demonstration or speech	
			Attend three meat goat project meetings	
			Help organize a meat goat show	
			Recruit a meat goat project member	
			Exhibit at a fair	
			Participate in a meat goat judging contest	
			Help conduct a meat goat skillathon	
			Participate on a meat goat quiz bowl team	
			Help organize a meat goat showmanship contest	
			Help a younger project member	
			My Choice:	
			- F3	

Project Highlights

Date and list the exciting things

Glue a picture of you and your meat goat here.

Achievement Program

Directions

- Do at least seven of the Growing with Meat Goats and Udder Ideas activities each year.
- Complete at least 21 of the Growing with Meat Goats and Udder Ideas activities within three years to complete this Achievement Program.
- Have your project helper date and initial the activities as you complete them and discuss them.

Growing with Meat Goats Activities	Date completed	Helper's initials
Chapter 1 Health and Disease		
Is Your Wether Under the Weather?		
Put Your Veterinarian on Speed Dial!		
Chapter 2 Selection		
Choosing Your Genes		
Chapter 3 Feeds and Nutrition		
Mares Eat Oats and Does Eat Oatsand Sometimes Toxic Plants!		
Through Thick & Thin		
Chapter 4 Husbandry of Animals and Re-	sources	
The Scoop on Poop		
Being Water Wise		
What You Don't Know		
Chapter 5 Reproduction		
AndACTION!		
The Birds and the Bees		
No Kidding Around!		
I Kid You Not		
Chapter 6 Marketing and Products		
'Round the Ring and Back Again		
Holy Cabrito!	- MI -	

Udder Ideas

Select and do any of the *Udder Ideas* activities in *Growing with Meat Goats* or make up your own. Record the page and number of each one you complete and have your helper initial.

Page	#	Date completed	Helper's initials
Vrite voi	ur own act	tivity here.	

Date

Date_____ Helper's initials__

Helper's initials



Abscess

Anaerobic

Antibodies

Diarrhea

Recumbency

 Calculi Carrier

Coccidiostats

Colostrum

Deficient

Founder

Fatal

• pH Arthritis

 Encephalitis Caprine Modified live

> vaccine Syndrome

> > Toxin

Necropsy

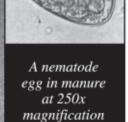
Nematode

 Inflammation Urolithiasis

Your Wether er the Weather?

ou have a lot invested in your market goat, so you'll want to be able to tell if and when he is sick. There are many diseases of goats; many are more common in market animals and others are more common in older animals. The first activity in this book will help you learn how to recognize and prevent market kid diseases so your animal can stay healthy and grow well.





Start Capering

diseases of market

Everyone participating in this activity should have twenty 3 x 5-index cards and a marker. Create a set of flashcards about diseases of market kids. The name of the disease should go on the front of the card. On the back, include the cause, signs of illness, and ways to prevent the disease. Finally, in pairs, teams, or as a large group, have fun playing a game using the flashcards.

Fill in the chart with name of disease, cause, signs of illness, and prevention. These topics will also go on the set of flashcards you make.

indicator:

Always consult your veterinarian if you have a question about your goat's health.



- People can catch orf from goats. If your animal has this disease, make sure to wear gloves when handling it until it is fully recovered!
- Dark skin pigmentation protects people and animals from skin cancer caused by the sun's ultraviolet rays.

Disease	Cause	Signs of Illness	Prevention
			5

Rumination © Discuss the answers to these questions with your helper.

Chew Your Cud (Share)

- Did using flashcards help you learn about these diseases? Why or why not?
- Where did you find the information you needed?

Gain Ground (Process)

- Why is learning in a group sometimes helpful?
- Why is it important to be able to tell when your animal is sick?

Forage for More (Generalize)

- If you wanted to learn more about diseases of goats, what would you do next?
- Besides flashcards, what other tools can you use to learn new information?

Wattle You Do Next? (Apply)

- How can you teach others about diseases of goats?
- How will you change your management practices now that you have learned more about these diseases?

Udder Ideas

Complete one or more of these activities and share the results with your helper.

- Interview a veterinarian about diseases of market goats.
- 2. Watch a necropsy of a goat.
- Create an educational poster about a disease of market goats.
- Sponsor a fun competition with another club using your flashcards.

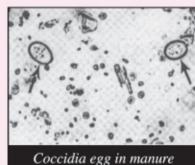
Meat of the Matter

Major Diseases of Market Kids

Here is a list and short explanation of most of the major diseases of market goats. There are many other diseases of goats, but some (like ketosis, mastitis, milk fever, Johne's Disease, etc.) do not affect young animals such as market kids. Some diseases are more common in some areas than in others. Your vet can help you learn how to recognize and treat these diseases if they ever occur in your herd. Remember, prevention is the key!

Acidosis: low rumen and body pH usually caused by ingestion of high levels of carbohydrates such as grain, fruit, molasses, etc. Animals go off feed, stop chewing their cud, are depressed, can be bloated and have diarrhea. Severely ill animals may founder or die. Prevent by insuring adequate levels of fiber (hay or browse) in the diet, making ration changes gradually, using probiotics and sodium bicarbonate, and keeping grain safely locked away from goats.

Coccidiosis: very common disease caused by one of several protozoal parasites of the intestinal tract of goats. Very contagious and very hardy in the environment. Affected animals may have diarrhea, often have a rough coat, don't gain well, have a pot belly, and may die. Prevent by buying quality animals from a herd without coccidiosis and/or feeding specific feed additives (coccidiostats) to all growing animals. Practice good



o courtesy Dr. William For

manure management and do not feed animals on the ground.

Parasites: there are internal and external parasites. Many types affect young goats, including *nematodes* ("stomach worms" or "round worms"), flukes ("flat worms"), tapeworms, protozoa, bots, lice, and more. The most serious and common are stomach worms; heavy infestations can kill young animals. Prevent by practicing good manure management, avoid feeding on the ground, and

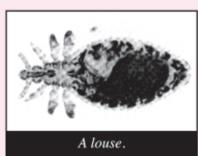
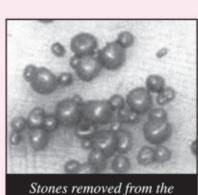


Photo courtesy Dr. Wil

deworming young animals with a high-quality wormer every two months, starting at two months of age (or as determined by fecal examinations or recommended by your vet). External parasites include lice, keds, ticks, flies, bots and fleas.

Urolithiasis (urinary stones or calculi): minerals in the urinary tract form into stones that block the tract, especially in males on high grain diets. Signs include pain when urinating, bloody urine, frequent attempts at urination, or no urine. The urethra can rupture ("water belly") and the animal may die. Prevent by adding ammonium chloride to the diet, providing at least two parts calcium to every one part of phosphorus in the ration, and feeding as little grain as possible for the desired rate of gain.



Stones removed from the urinary tract of a blocked goat.

Photo courtesy Dr. Ahmed Tibary. Used with permission. Overeating Disease: caused by toxins produced by the bacteria Clostridium perfringens types C and D. Most common in large, rapidly growing animals on high grain or milk diets. Signs include bloat, poor appetite, fever, diarrhea, or sudden death. Prevent by vaccinating does with CD&T during the last 2-3 weeks of pregnancy, making sure kids get colostrum within 12 hours of birth. and vaccinating kids with CD&T at 6, 9 and 12 weeks of age (or as recommended by your vet).

Tetanus: a fatal disease caused by toxins produced by Clostridium tetani. Signs include generalized rigid stiffness of muscles. Animals die from the inability to breathe. Prevent as above with vaccinations of CD&T.



Photo courtesy Dr. Clive Gay. Used with permission.



Photo courtesy Dr. James Thompson, Somerset Animal Hospital. Used with permission.

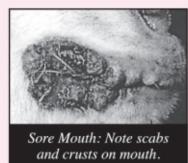
White Muscle Disease: caused by lack of adequate Vitamin E and/or Selenium in the diet. Signs include weakness, stiff gait, frequent recumbency and/or death. Prevent by giving pregnant does an injection of Vitamin E/Selenium in the last month of pregnancy and injections to kids at birth, one month of age and even monthly in some areas of the country, on the recommendation of a veterinarian. Also include Selenium in free choice trace-mineralized salt.

White Muscle Disease: Note normal, dark red areas of muscle and abnormal, pale areas of muscle in this hind leg.



Photo courtesy Dr. Clive Gay. Used with permission.

Orf (sore mouth): ulcers of the mouth and muzzle caused by a very hardy and contagious virus. Affected animals go off feed due to pain. Most common in young animals; can spread to does' udder and cause mastitis. Often picked up at shows. If it appears in your herd, prevent by using a modified live vaccine in all kids in the future. Photo courtesy Keith Thompson, Massey



University, New Zealand. Used with permission.

Caprine arthritis and encephalitis (C.A.E.): two different syndromes caused by the C.A.E. virus., which is most often spread from doe to kid through colostrum and milk. In kids less than six months old, the virus often causes fatal inflammation of the brain. Adults get arthritis and have swollen and painful joints, and/or hard udders and weight loss. No vaccine is available. Control by working with your vet to test animals and create a negative herd.



Many of the organisms that cause goat diseases can live a long time in the environment, so it is best not to let them get introduced onto your property!

Caseous lymphadenitis (C.L. or abscesses): contagious disease of sheep and goats caused by bacteria called Corynebacterium pseudotuberculosis. Abscesses usually form around the head and neck; they break and drain and contaminate the environment for a long time. Rarely fatal but is a concern due to unsightliness of abscesses and contagious nature of the disease. The disease is very difficult to rid from a herd; avoid purchasing animals from herds with a history of abscesses.

Pinkeye (infectious

keratoconjunctivitis): contagious disease of the eyes caused by several kinds of bacteria. Most common during summer months when flies are active. Some animals in a herd can be carriers. Affected animals tear, blink, avoid light, and may eat poorly; Surface of eye can turn bluish-white and surrounding tissues are often bright reddish pink. Without treatment, severely affected eyes can go blind. Ask your veterinarian about what medications can be legally used to treat this condition.

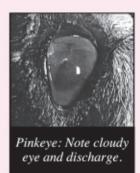


Photo courtesy Keith Thompson, Massey University, New Zealand, Used with permission,

Polioencephalomalacia (pole-E-oh-en-seff-allo-mal-A-sha): softening of the brain caused by lack of Thiamin, also called Vitamin B-1. Normally, rumen micro-organisms make B-Vitamins in the rumen. If these micro-organisms are killed off or otherwise disturbed, as in a case of acidosis, ruminants can become deficient in Thiamin and develop polio. Affected animals may act blind, walk in circles, press their head against a wall, twist their heads backwards onto their spines, or display other signs of brain abnormality. Treatment involves restoring normal rumen micro-organisms and supplementing B-Vitamins.

Blackleg: disease of muscles caused by an anaerobic bacterium called Clostridium chauvoei, which is found in some parts of the country. Bacteria enter the muscles through a tiny wound and kill surrounding tissues with toxins they produce. Affected animals are very lame and often die. Prevent with an eight-way Clostridial vaccination.

Photo courtesy Dr. Clive Gay. Used with permission.



Floppy Kid Disease: only affects kids that are about three to ten days old. Cause is unknown but could be bacterial toxins. Kids are not dehydrated, but they are weak and may not be able to stand. The belly may seem enlarged and they may drool and/or cough. The kid may feel cold and the temperature can be lowered or elevated. Without treatment, many kids die within two days. If you see these signs of illness in a young kid, call your vet at once. If Floppy Kid Disease is diagnosed, your vet may recommend that you give the kid a half-teaspoon of baking soda (dissolved in a small amount of water) by mouth to counteract lowered body pH; improvement should be noted within two hours.

Some other diseases of market kids include pneumonia, foot rot and ringworm.

Colostrum is the first milk produced by a doe after she kids. It contains vitamins, fat for energy, and antibodies to protect the kid against diseases.

Project skill: Selecting and working with a veterinarian

Life skill: Communication

What youth Select and get acquainted with the veterinarian

will do: who will care for their animals

Success Selects an appropriate veterinarian and knows how to work with him/her

to care for goats



It was a dark and stormy night. Jorge the goat had gotten out and fallen into Dawson's Creek. Billy Bob, his owner, found him coughing, weak, and running a fever the next morning. This is one of many scenarios you could encounter while raising goats. Do you have a veterinarian you could call and ask for advice? This lesson will help you select a veterinarian and find out how he/she would like to work with you to care for your animals.

Start Capering

Call at least two veterinarians and interview them over the phone about their background and experience with goats. Following the phone interview, schedule an appointment with one veterinarian and meet them in person for additional questions.

Vet #1:	Vet #2:
Date:Background/Experience:	Background/Experience:
Appointment Date:	Appointment Date:



Vets are an excellent source of information about goat health and care.

Things to know about your goat when you call the vet:

- Temperature, heart rate and respiration rate
- Appetite
- Any swellings, wounds or lameness
- Is the animal bloated?
- · Body condition
- Quality and quantity of manure and urine
- · Odd odors
- Recent changes in diet or environment
- Date of last deworming
- Vaccination history
- · Age, breed, gender
- Kidding history
- · Udder health



About 900 veterinarians are members of the American Association of Small Ruminant Practitioners.

Rumination§

Chew Your Cud (Share)

- How did you find the veterinarians you interviewed?
- over the phone or in person? Why?

Which did you prefer, interviewing veterinarians

Gain Ground (Process)

- Why is it important to have a good working relationship with a veterinarian?
- Why is it a good idea to do some research and select the veterinarian who is the best fit with you and your goats BEFORE an emergency?

Forage for More (Generalize)

- What are some other situations where you may need to interview and select someone?
- What other goat-related professionals might you need to select to work with your herd?

Wattle You Do Next? (Apply)

 How will conducting these interviews help you when you are interviewed in the future?

Meat of the Matter

Choosing a Vet

Veterinarians are people who have studied a long time to learn how to prevent, diagnose, and treat disease and illness in animals. Also, they care about animals! Not all veterinarians treat goats; you may have to do quite a bit of research to find a goat veterinarian in your area. Goat veterinarians in your area can also be found on lists on the Internet. Try a search for "goat veterinarian."

Veterinarians are busy people, so be sure to set up an appointment for your interview. They will need to block out time to devote to answering your questions without interruptions!

Once they have established a working relationship with you and your goats, many veterinarians are willing to give advice over the phone when you call with a question or problem. As required by federal law, a valid client-patient-veterinarian relationship must exist before your veterinarian can write any prescriptions for your animals or recommend any medications that are not specifically approved for use in goats.

When you are looking for a veterinarian for your goats, here are some questions you may want to ask during an interview:

- · Please describe your background and experience with goats.
- How can I tell when something is wrong with my goat, and when should I call you about it?
- What are some of the things you might ask when I call, so I can check on it before I contact you?
- How do I contact you after office hours or during an emergency?
- Is there an additional fee for emergencies or services after office hours?
- Will you come out to my farm or do I have to bring my goats to your office? Is there a difference in fees?
- Do you allow youth to observe your work at your office or on farm calls?
- How can you help me prevent disease and illness in my animals?
- Are you willing to write prescriptions for syringes, needles, and medications for my herd if I need them?
- Are you willing to give educational presentations about goat health and disease to my goat group?
- If I incur a large bill from something that happens to my goats, do you accept payments over time? May I work off part of the bill by helping in your clinic?
- After your interview, remember to thank the veterinarians for their time both in person and with a card.

Udder Ideas

- Research and learn about five veterinary colleges.
- **2.** Travel with a goat veterinarian for a day.