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Dairy Goats

This We Believe:

- The boy and girl are more important than the projects.
- The member should be their own best product.
- No award is worth sacrificing the reputation of a member or leader.
- Competition is a natural human trait and should be recognized as such. It should be given no more emphasis than other fundamentals.
- Learning how to do the project is more important than the project itself.
- Many things are caught rather than taught.
- A blue ribbon member with a red ribbon project is more desirable than a red ribbon member with a blue ribbon project.
- To learn by doing is fundamental in any sound educational program.
- Generally speaking, there is more than one good way of doing most things.
- Every member needs to be noticed, to feel important, to win, and to be praised.
- Our job is to teach members *how* to think, not what to think.

DAIRY & DAIRY GOAT

SELECTING 4-H DAIRY & DAIRY GOAT PROJECT MEETING TOPICS

THOMAS D. ZURCHER
Extension Specialist, 4-H Youth Development

IMPORTANCE OF THE TOPIC

This project meeting guide is designed to help you and your 4-H project members identify the topics you will explore at your five or more yearly project meetings. Following each activity is a (1), (2), or (3) to give you an indication of the degree of experience it will usually require for a 4-H'er to be able to demonstrate this skill to others. The higher the number the more experience needed. If your learn by doing activities can be sequenced so your members may build on what they already know, a better learning experience will result. You will find a line preceding each topic for you to write in the date of the meeting at which your members will explore that particular topic. Check with your extension agent on the availability of project meeting guide "Planning the Project Group's Yearly Program" It will help your group get off to a good start.

Selection & Judging

___Identifying Breeds (1)
___Identifying Parts (1)
___Selecting Your Project Animal (1)
___Constructing The Ideal Dairy Animal (2)
___Classifying A Dairy Animal (2)
___Reading & Evaluating Pedigrees (2)
___Recognizing Abnormalities & Faults Of Dairy Animals (2)
___Conducting A Judging Contest (3)
___Selecting A Judging Class (3)
___Judging A Judging Class (1)
___Talking Like A Dairy Judge (3)
___Presenting Oral Reasons (2)
___Scoring A Judging Class (2)

Management Practices

___Identifying Your Project Animal (1)
___Making A Rope Halter (1)
___Identifying Project Equipment (1)
___Determining A Dairy Animal's Weight (1)
___Tattooing A Dairy Animal (2)
___Trimming A Dairy Animal's Hooves (2)
___Castrating A Dairy Animal (2)
___Dehorning A Dairy Animal (2)
___Setting Goals for Profitable Dairy Production (2)
___Constructing A Dairy Goat Manger (3)
___Calendarizing Livestock Management Practices (3)
___Weaning A Dairy Animal (2)
___Understanding Dairy Cow Behavior (2)
___Casting Cattle (3)
___Designing Facilities (3)

Kidding & Calving Times Skills

___Preparing The Doe For Kidding (2)
___Caring For The Newborn (2)
___Delivering A Dairy Animal (2)
___Saving A Weak Newborn Dairy Calf Or Kid (2)
___Removing A Calf's or Kid's Extra Teats (3)

Health Practices

___Recognizing The Healthy Animal (2)
___Taking A Dairy Animal's Temperature, Pulse and Breathing Rate (2)
___Identifying Herd Health Supplies (2)
___Stocking The Medicine Cabinet (2)
___Treating Scours In Dairy Animals (2)
___Treating Foot Rot (2)
___Detecting And Treating Mastitis (2)
___Examining A Fecal Sample For Parasites (2)
___Controlling External Parasites (2)
___Controlling Internal Parasites (2)
___Detecting And Treating Mastitis (2)
___Vaccinating Your Calf (3)
___Diagnosing And Treating Infectious Dairy Cattle Diseases (3)
___Tracing The Roundworms Life Cycle (3)
___Recognizing Common Animal Health Problems (3)
___Outlining A Herd Health Program (3)
___Administering Medication to Animals (3)

Records & Recognition

___Receiving Recognition Through 4-H (1)
___Understanding 4-H Livestock Records (1)
___Advancing Through Your 4-H Project (1)
___Keeping Feed Records (1)
___Keeping Your Animal Records (1)
___Understanding DHIA Records (2)
___Registering Your Animal (2)
___Culling Animals Through Records (3)
___Selecting Sires On Production Records (3)

Feeds & Feeding

___Identifying And Classifying Feed Ingredients (1)
___Selecting And Judging Hay (1)
___Understanding A Feed Tag (2)
___Feeding Your Project Animal (2)
___Sampling Livestock Forage (3)
___Understanding Animal Nutrient Requirements (3)
___Formulating A Ration (3)
___Balancing A Ration (3)
___Roaming Through The Rumen (3)
___Following Feed Through The Animal's Digestive System (3)
___Improving Forage Production (3)

Fitting & Showing

___Fitting Your Project Animals (1)
___Training A Dairy Animal For Show (1)
___Clipping A Dairy Animal (1)
___Showing Your Project Animal (1)
___Packing Your Show Box For Fair (1)

Careers

___Identifying Products From Farm Animals (1)
___Exploring Animal Science Careers (2)

Reproduction & Genetics

___Understanding Systems Of Breeding (3)
___Tracing The Development Of the Unborn (3)
___Understanding The Heat Cycle Of Dairy Animals (3)

Milk & Marketing

___Using Proper Milking Procedures (1)
___Cleaning Milking Equipment (1)
___Identifying Milk Products (1)
___Preventing High Bacterial Count (2)
___Making Yogurt (2)
___Making Soap (2)
___Evaluating Milk Flavors (2)
___Preventing Mastitis Flare-Ups (2)
___Examining The Composition Of Milk (2)
___Understanding Milk Related Terms (2)
___Making Cheese (3)
___Making Butter (3)
___Producing Milk In a Dairy Animal (3)
___Following Milk From Farm To Table (3)
___Selecting A Milking System (3)

Other Project Activities

___Giving A 4-H Presentation (1)
___Attending A Livestock Show (1)
___Conducting A 4-H Project Bowl (2)
___Conducting A 4-H Skillathon (2)
___Evaluating Your 4-H Project Meeting (2)
___Conducting Tours And Field Trips (3)

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DAIRY & DAIRY GOAT

SELECTING A 4-H DAIRY PROJECT CALF

JEFFERY K. RENEAU
Extension Dairy Specialist

IMPORTANCE OF THE TOPIC

Selecting a calf is a very important decision for the 4-H member. Choosing the right project animal requires lots of study and thought. Just as the dairyman, the 4-H member should use all the tools available to assure a wise decision.

WHAT YOUR 4-H'ERS WILL ACCOMPLISH:

By actively participating in this dairy project meeting your 4-H'ers will be able to:

1. Select a calf using 3-5 different criteria.
2. Explain the reasons for the selection.
3. Develop skills in decision making, learn how to use information and gain confidence.

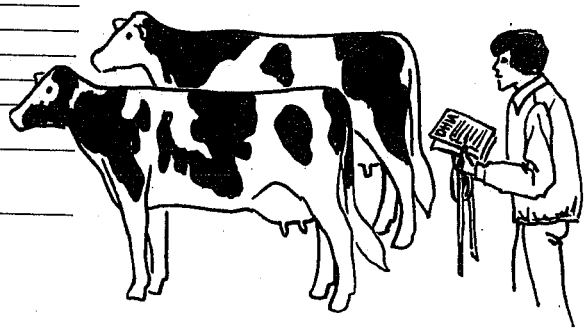
PREPARE FOR THE MEETING:

In order to be prepared to help your members actively learn how to select a calf you'll want to have available for them:

- 2-4 actual calves (or pictures if calves are not available)
- information on each calf so that members will be able to fill out the calf selection form
- paper to make a calf selection form (see reduced form below)
- University of Minnesota Oral Reasons Note Card (optional)
- Pedigrees, DHIA records, growth chart weighing tape and health records from which to extract the needed information
- Dairy Calves and Heifers, 4-H Dairy Project Notebook

Calf Selection Form

	Calf #1	Calf #2	Calf #3	Calf #4
Date-birth				
Herd Name				
DHIA (yes or no)				
AI Sires (yes or no)				
Size for Age				
Health Records (Vacc., etc.)				
PDM Sire				
PDT Sire				
Dams Prod.				
Dams Ranking in Herd				
Dams Cow Index or DHIA EATA				
Dams Type (if known)				
Price				
Rank which calf you would pick 1st, 2nd, or 3rd				
Reasons for Decision:				



FACILITATE THE ACTIVITY:

Before your 4-H'ers are told or shown how you or some other expert would go about selecting a calf, allow them an opportunity to see how much they can figure out themselves. One way to do this is to divide them into teams of 2 or 3; provide them with information they can use to make their selection; and then present them with a situation and a task to do. For example:

SITUATION: You are just beginning a 4-H dairy project. Your brothers and sisters all have had 4-H dairy projects before and have had lots of fun showing at various county fairs and the State Fair. Your dad says you may select from any of

the cows in his herd or you may buy the calf from a neighbor. You would like to select an extra special calf.

YOUR TASK: Using the selection form and all the information available, select a calf you would like for a project animal and be prepared to explain why you made the decision.

If you are using actual calves ask your junior leaders or other adults to assist by providing specific information to the teams as they ask for it. After each team member of the team has compiled the necessary information they should analyze it and make their decision. Allow each team an opportunity to present its decision and reasons for deciding as they did.

After all teams have given their reasons, have the member who you have previously asked to give the "official" placing and reasons, do do at this time. Questions and comparison of information on the teams' calf selection forms should be encouraged.

QUESTIONS TO ASK:

Q. How do you decide which breed to select?
A. After studying each breed, select the one you prefer (Ayrshire, Brown Swiss, Guernsey, Jersey, Holstein).

Q. Should a registered or grade animal be purchased?
A. Although it is not necessary, you should consider selecting a registered animal. A registered animal may be worth more later and is usually eligible to be shown in more shows than grade. However,not all registered animals become profitable cows. Certainly a top-quality grade heifer is a better investment than a 'just average' registered purebred. Be sure to select a good calf whether registered or grade.

Q. From whom should you purchase your calf?
A. Perhaps if your parents have a good herd, this may be the best place to get your calf. If your neighbors have good herds they might be glad to give you a start. Rely on the wisdom of some of these good breeders. Other resource people that may be able to suggest where to buy a good calf will be your 4-H Agent, AI technician or veterinarian, or any member or official in your county or state dairy breed organization. They will know which dairymen have good cattle. Regardless of where you go to buy your calf (even if from your parent's herd) be scientific in your selection; use all the toos available to you.

Q. How old should your calf be?
A. There are two matters that must be considered here. First of all, it is best to buy a calf that is 3 to 6 months old. By this time the calf has been weaned, off to a good start, and less susceptible to disease. Secondly, the birth date is an important factor in determining which class the calf will be whown in. Generally the older calves in each class are at an advantage and place higher. Therefore, it would be advisable to select a calf that would be one of the older animals in its respective class.

Q. What are some additional guidelines which are used in calf selection?
A. 1. The herd should be on DHI records and one where AI sires have been used for several years.
2. Pick a calf from a dam ranked in the upper one-third of the herd.
3. The PDM of the calf's sire should be + 1000 lbs. or more and the PDT should be plus.
4. Either the USDA Cow Index or the DHIA EATA rating for the dam of your prospective calf should be about + 600 lbs. of milk.
5. The type classification of the dam should be at least Good Plus or Desirable.

Q. What do the following abbreviations in words mean when selecting a calf?
A. **USDA Cow Index (or DHIA EATA)** The estimated transmitting ability of a cow for milk and fat production is a measure of the cow's genetic merit.

PDM—The Predicted Difference Milk is the best estimation of a bull's ability to transmit the ability to produce milk to his daughters over and above the production of their herdmates.

Classification—Numerical score 0-100 based on the conformation of the individual as compared to the ideal.

PDT—Predicted Difference Type is the best estimate of a bull's ability to transmit conformation (type) characteristics to his sons and daughters.

TPI—Total Performance Index Composite estimate of a sire's genetic cabability derived by emphasizing milk to type at a three to one ratio.

RPT—Repeatability—Statistical reliability of the measurement.

Summarize the Activity:

After the teams have given their reasons allow one of your members the opportunity to be the "official" judge by giving placings, reasons, and cuts (margin of difference) between the pairs. Questions and comparison of information collected on each team's calf selection form should be encouraged. Talks, demonstrations, films, and slide sets are appropriate as followup activities.

Pat on the Back:

You deserve a pat on the back for allowing your members to actively seek out answers for themselves in a supportive atmosphere which recognizes your 4-H'ers right to make mistakes and have fun.

Supporting Topics

Scoring A Judging Class
Judging A Dairy Class
Using Dairy Judging Terminology

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DAIRY & DAIRY GOAT

USING DAIRY JUDGING TERMINOLOGY

JEAN WIEGREFE
Extension Agent

IMPORTANCE OF THE TOPIC

Every field of endeavor has its own language, its own vocabulary, its own set of terms. Communicating ideas and justification to others concerning the evaluation of an animal or placing in a class will be easier if you use the most descriptive, appropriate terms available.

This activity will be most effective if it follows the "Identifying Parts of the Cow" activity.

WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By actively participating in this project activity, your 4-H'ers will do the following:

1. Use at least three descriptive terms per scorecard category.
2. Develop skills in expressing justification for decisions and comparisons.

PREPARE FOR THE MEETING

This activity will proceed most smoothly and successfully if you can plan to hold it in a location where you have access to several (at least two) dairy cows on which the differences in characteristics, expressed in specific terminology, can be pointed out. If this is not possible, illustrations available from the various breed organizations may serve a similar purpose, although the live animal is usually more effective. Slide sets are also available through your extension office.

After a five minute review of the parts of the cow, allow ten minutes per scorecard category to go over the terminology appropriate to that category (45 minutes total) and two minutes per 4-H'er to practice his or her new skill. You will need to have on hand to help illustrate your activity:

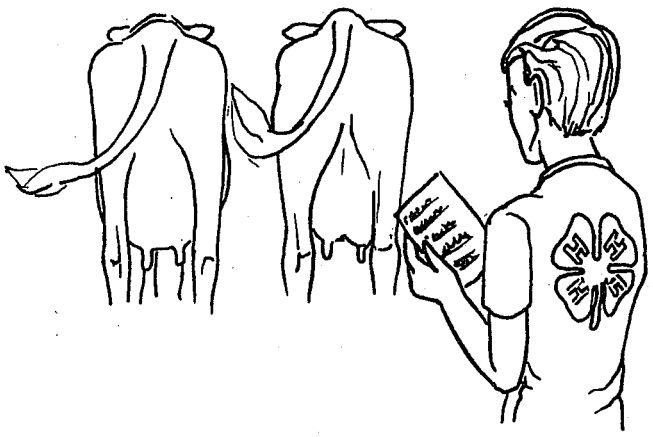
1. A poster listing the four dairy cow scorecard categories (General appearance, Dairy character, Body capacity, Mammary system)
2. Copies of Extension Folder 346 "Judging Dairy Cattle" for each 4-H'er, or copies of the dairy cow scorecard
3. Copies of 4-H M-148 Oral Reasons Note Cards for each member

FACILITATE THE ACTIVITY

4-H'ers absorb and retain more information when they actively participate in the learning activity than if they listen to a lecture or watch a demonstration. Also, knowing why this information could be important to them will give them more reason to pay attention. For example, if you understand dairy judging terminology you can:

1. Understand why judges at dairy shows place classes the way they do—their reasons make sense.
2. Communicate more easily with other people interested in dairy cattle.
3. Be on your way to giving a good set of oral reasons, since reasons are 75 percent accurate terminology, 15 percent planning, and 10 percent style.

Review the parts of the cow, either through a short verbal quiz or a written diagram. Once the correct names of the parts are in mind, the rest of the terminology comes easily. Figure 5 in Extension Folder 346 offers several suggestions for comparative terms. Experienced judges and county extension agents can, in many cases, find lists of many more. Constantly remind your 4-H'ers that aside from naming a part of a cow, a term will often also compare that trait of one cow with that of another, using adjectives like more, smoother, higher, wider, sharper, cleaner, longer,



stronger, straighter and shorter. These terms are very descriptive and are much more accurate than using "better". Presenting terms to describe dairy cows in groupings that fit the scorecard categories can help your members remember them through association. This method can also help teach what desirable traits are included in each category.

SUGGESTED ACTIVITIES

1. Presenting several terms in each category with a complete explanation of what it means, by showing the comparison on two cows, can be very effective. Question your 4-H'ers at the conclusion of your list in each category to quiz them, reinforce the terminology, and be sure they understood what you showed them.
2. After presenting the comparison between a couple of sample terms, have the 4-H'ers break down into teams of 2 or 3 members to work together to figure out what a selected 3 to 5 terms mean. Their results should be shared with the total group, giving them an opportunity to practice their "public speaking" skills and support their decisions, as well as work as a team.
3. Ask each 4-H'er to give a short (2 minutes at most) comparison of two cows in one scorecard category, using the terms learned. This reinforces the terminology, helps 4-H'ers think in a comparative fashion, and creates opportunities to speak in front of a group.

QUESTIONS AND ANSWERS

Some questions you might ask members during this project activity are listed below. Try to ask questions that require members to refer to the parts of the animal, compare traits between two animals, or use the terminology being studied.

1. What does the mammary system of an ideal dairy cow look like?
2. How do these cows differ in general appearance (or body capacity, dairy character, mammary system)?

SUMMARIZING THE ACTIVITY

Your 4-H'ers may like to see someone give a formal set of oral reasons comparing the cows they've been talking about, to get an idea how the terminology can be used. Encourage older members to try this, and try to help all members use the terminology they've learned when referring to their project animals, etc.

Supporting Activities

Other meeting topics which complement this activity include:

Identifying Parts of an Animal
Recognizing the Ideal Animal
Judging a Dairy Class
Presenting Oral Reasons

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DAIRY & DAIRY GOAT

JUDGING A DAIRY CLASS

JEAN WIEGREFE
Extension Agent

IMPORTANCE OF THE TOPIC

Many activities are difficult to grasp until you are familiar with the rules, expectations, and process. Learning how to judge a dairy class not only allows a 4-H'er to participate in a judging workshop or contest, but also builds a framework for comparison of cattle, selection of show or breeding stock, and helps the individual to practice the process of decision-making.

This activity will be most effective if it follows the "Identifying Parts of the Cow", "Recognizing the Ideal Animal" and "Using Dairy Judging Terminology" activities.

WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By actively participating in this project session, your 4-H'er will do the following:

1. Use at least three decision-making frameworks when judging a dairy class.
2. Develop skills in making and justifying decisions.

PREPARE FOR THE MEETING

This activity will proceed most smoothly and successfully if it can be held in a location where you have access to four dairy cows of the same age grouping (i.e. two-year olds) which can be used as a practice judging class. In an optimum situation, two groupings would be available so that one class can be used for the discussion and another for reinforcement.

After a five minute review of the parts of the cow, how a cow is evaluated and how to use the dairy cow scorecard, (as found in Extension Folder 346 "Judging Dairy Cattle"), a couple of short activities would illustrate steps that can be used when judging a class (5 at 5 minutes each). A consensus placing with informal reasons on the practice class, plus ten minutes to judge the second class and ten minutes to discuss it, with five minutes in between to explain how to mark the judging card, brings this total activity to 55 minutes.

Supplies to have on hand:

1. Judging cards
2. Pencils, notepaper, clipboards
3. Some method of numbering the cows
4. Extension Folder 346 "Judging Dairy Cattle"
5. University of Minnesota Oral Reasons Note Cards

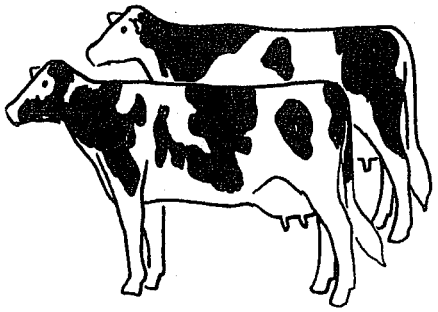
FACILITATE THE ACTIVITY

There are several steps that 4-H'ers can use to help them place a judging class. Here are suggestions for showing your members how each can be used. You will find that each step builds upon the last, refining the placing to a final decision.

First Impression: Ask your 4-H'ers to take a quick look at each animal and write down a placing based on those quick looks (allow them only a minute or so). Your first impression is often the best. Stick with it unless close inspection gives you a good reason to switch. If a class has an easy top or bottom, recognize it. Then spend your time on difficult placings.

Compare placings on first impression. What do you notice right away that tells you whether or not a cow belongs at the top of the class? How can this be misleading?

Note Each Animal: Ask your 4-H'ers to spend a minute per cow going over the dairy cow scorecard. They should make note of outstanding or detracting characteristics. Then, place them according to this close inspection (or modify first impression placing). Compare placings after close inspection. Did anything you noticed here change your mind about how the class should be placed? Can placing a class based on close inspection be misleading?



Place the Class Based on Scorecard Categories: Ask your 4-H'ers to spend a minute per category deciding how the individuals in the class compare to one another only in those characteristics . They should write down those placings and formulate a total placing from the averages. Compare placings after reviewing the class based on categories. Did anything you noticed here change your mind about how the class should be placed? Did the point weight of the categories (general appearance and mammary system at 30 and dairy character and body capacity at 20) have any influence over your total placing?

Take Notes: Ask your 4-H'ers to spend five minutes taking notes on the class according to their total placing from the previous activity. They should write a brief description of each animal to assist in recall, two to four definite differences on each pair, and a list of all grants. The use of the oral reasons note cards may be helpful for beginning judges.

Were there items to jot down for each pair? Does it look like there are enough points of justification for placing the class this way? Did you change your placing at all after you started taking notes?

Reasons: Thinking through your reasons helps avoid bad placings. Ask a couple of your 4-H members to informally share their reasons for their placings. They may only wish to start out by talking about just one pair instead of the whole class.

Did each 4-H member have the same final placing? Why or why not? Did each 4-H member agree as to the reasons one cow was placed over the other?

SUMMARIZING THE ACTIVITY

Developing a routine to gather the information you need makes judging a dairy class much less threatening. However, this is a skill that takes time and practice to develop. Many opportunities should be provided to judge classes of different ages and breeds, as well as to develop other skills related to judging dairy cattle.

Supporting Activities

Meeting topics which support this activity include:
- Identifying Parts of the Cow
- Recognizing the Ideal Animal
- Using Dairy Judging Terminology
- Preparing and Presenting Oral Reasons
- Scoring a Judging Class
- Conducting a Judging Contest

References

Extension Folder 346 Judging Dairy Cattle
Extension Bulletin 340 Livestock Judging (on marking cards)

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DAIRY & DAIRY GOAT

CARING FOR THE NEWBORN CALF

JEFFREY K. RENEAU
Extension Dairy Specialist

IMPORTANCE OF THE TOPIC

On the average only 80 percent of our dairy heifers born on the farm will reach the milking string. Although there are several reasons for this, the major cause is calf death loss in the first month of life. We would like to keep calf death losses at a minimum (less than 5 percent). Genetic progress depends on how many good heifers your 4-H'ers are able to bring into their milking herd.

The purpose of this project meeting guide is to help you as a leader or junior leader provide a learn by doing experience for your 4-H members.

WHAT YOUR 4-H'ERS WILL ACCOMPLISH

Your members should be able to do the following by the end of the project meeting:

Demonstrate the steps necessary to care for a newborn calf.

Organize and present a team demonstration to help develop the life skills of working with others and orally presenting information.

PREPARE FOR THE MEETING

Ask the 4-H'ers to read and discuss with their family the section in their 4-H manual on caring for the newborn calf. You may also want to ask them to bring some of the supplies and materials:

Supplies needed:
Tincture of iodine; feed sack or towel; colostrum and bottle; model calf (U of MN Calf Pattern available); sentence fragments written on cardboard for matching exercise.

Resource material:
4-H Dairy Project Workbook (calves & heifers)
U of MN Ext. Folder 313, "Keeping Dairy Calves Healthy"
Hoard's Dairyman Calf Care Booklet.

FACILITATE THE ACTIVITY

The way you as a leader involve your members in the learning situation will be very important. In order to allow the members to develop both their project skills and life skills, actively learning by doing instead of listening or watching someone else will be especially important. Here are 9 steps which will help you quickly involve your members:

1. Divide into teams.
2. Make available supplies
3. Provide each team a realistic situation and a task to do.
4. Step back and allow the members time to discover their own solution.
5. Respond to 4-H'ers questions with questions so the answers are their own.
6. Listen to the member's presentation.
7. Accept their solutions.
8. Ask questions to help them build on what they presented.
9. Reinforce their efforts with praise.

SITUATION: You have been assigned the responsibility of caring for the newborn calves. Your sister has just come from the barn and let you know that "Old Dolly" was beginning to have her calf.

YOUR TASK: Demonstrate the steps you would take during delivery and the first 30 minutes of the calf's life.

QUESTIONS TO ASK

Some teams may need assistance preparing their demonstrations. Move from group to group and ask questions which will help them broaden their understanding. Here are some examples:

Q. Suppose you do not have a maternity pen, how could you provide a clean calving environment for a cow in a stall?

A. Place a grate over the gutter or a couple of bales of straw edgewise in the gutter. Also, coarse barn lime covered by fresh straw under the cow will provide a dry stall with better traction, should the cow have trouble getting up.

Q. Should we attempt to assist the cow at calving?

A. Normally it is not necessary; however, timely assistance when a cow is having difficulty reduces stress on both the cow and the calf. Recent research has shown that for every 10 minutes increase in labor the cow will take an average of two days longer to come into heat. Be sure you are working with the cow. This does not mean a block and tackle. Too much pressure on a malpositioned calf can injure both the cow and the calf. However, one or two people pulling on the calf will not cause injury. If sufficient progress is not being made within one-half hour, something is wrong and you may need help.

Q. Given the nine steps on individual cards, put them in order as you would do them, and then match them with another set of cards listing the reasons why each step is important.

A. Below are the two lists to put on cards.

WHAT	WHY
Provide a clean maternity area.	Prevents the calves or the cows reproductive tract from being contaminated with disease-causing bacteria.
Assist the cow at calving if necessary.	Reduces calving time and calving stress.
Be sure the calf's nostrils are clear.	Helps calf breathe.
Hang calf by hind legs.	Drains mucous from nose, mouth and trachea.
Tickle inside nostril or rub ribcage vigorously.	Stimulates breathing.
Dry calf.	Stimulates blood circulation and reduces cold shock.
Dip navel.	Prevents infection.
Feed colostrum.	Feed at 6 percent of body weight during the first 6 hours of life to confer passive immunity.
Place in separate clean pen.	Reduces sucking problems, and helps prevent transmission of disease.

Summarizing the Activity

The demonstrations should provide a good summary of the meeting's activities. Encourage questions and praise the 4H'ers efforts.

SUPPORTING ACTIVITIES

Delivering a calf.
Identifying cattle.
Treating a scouring calf.
Administering medication to cattle.

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4-H Animal Science.
Project Meeting Guide, AS-25, '81

DAIRY & DAIRY GOAT

TREATING THE SCOURING CALF

JEFFREY K. RENEAU
Extension Dairy Specialist

IMPORTANCE OF THE TOPIC

The serious problem of calf scours is responsible for a high percentage of calf death losses. By helping 4-H'ers to successfully identify and treat the condition an important management skill will be shared.

WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By actively participating in this project meeting your 4-H'ers will be able to do the following:

Demonstrate how to identify a dehydrated calf.
Demonstrate how to prepare and administer calf electrolyte solution.
Further develop their life skills of making decisions and demonstrating to others.

PREPARE FOR THE MEETING

A little time spent planning the meeting, reviewing the resource materials, collecting the supplies required, and involving others in each of these steps will often mean the difference between a very hectic meeting and a very exciting one for both you and your members. These are the materials you'll need:

A model calf made from the University of Minnesota 4-H Calf Pattern or a real calf
Scour medication; electrolyte recipe and ingredients—corn syrup, baking soda, table salt, bowl and measuring utensils
Esophageal feeder and/or oral calf feeder, calf bottle, and pail
Slide/tape set
4-H Dairy Project Manual and Extension Folder #313,1975, Keeping Dairy Calves Healthy, D.W. Johnson & Hansen, University of Minnesota.

FACILITATE THE MEETING

In order for your members to really understand enough so that they'll be able to give a demonstration to others you'll want to let them learn by doing before you show or tell them how. One way to quickly get them involved is to have them form teams of two or three, provide them with the necessary supplies, and give them a situation and a task to do. Then step back and allow them an opportunity to discover for themselves how to do the task.

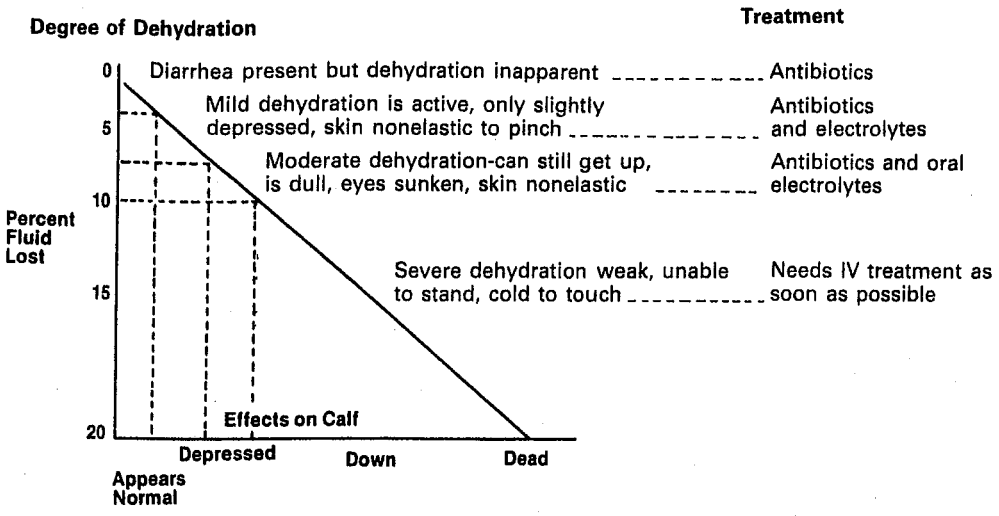
SITUATION: You notice that one of your 4-H calves has suddenly developed scours. She appears gaunt and sunken-eyed but still can stand. She will drink but is very weak. You cannot get a veterinarian.

YOUR TASK: Demonstrate what you would do to save this calf.

QUESTIONS TO ASK

Many times after the teams have had a chance to work on their task a few questions may expand their understanding. Strive to answer their questions with questions, so they solve the problem themselves.

Q. What happens to the fluids in a scouring calf's body?
A. Fluids are rapidly lost leading to dehydration, shock, and acidosis which are the real causes of death rather than intestinal infection.
Q. How can you replace the fluids lost?
A. Prepare and feed an electrolyte mixture at the rate of 8-10% of body weight divided into 3 equal feedings daily.
Q. What happens if the calf is too weak to drink the electrolyte solution?
A. Use an esophageal feeder (or an oral calf feeder or fluid feeder).
Q. How do you use an esopogeal feeder?
A. 1. Lubricate the esophogeal feeder probe.
2. Extend the calves head and neck.
3. Insert the probe over the top of the tongue and gently push down the calves throat until only a few inches of the rigid portion of the probe is still visible. DON'T BE AFRAID!!! The tear shaped ball on the end of the probe is designed so that the probe cannot be inserted into the trachea (wind pipe).
4. Sanitize the feeder after each use.
Q. With the help of the chart figure out at what point in the course of this disease is it absolutely necessary for veterinary assistance with IV fluids and antibodies to save the calf.
A. When the calf is too weak to stand, eyes are sunken and limbs are cold.



Percent Fluid Lost

Q. What is an electrolyte solution?

A. A solution of various salts given to reestablish the proper balance in the animal's body.

Q. What if a commercial calf electrolyte solution is not available?

A. A perfectly adequate homemade solution can be made as follows: (actually mixing a solution should be encouraged as a part of each team's demonstration. Simply provide them these two recipes to choose from).

"Quick Formula"
1 tablespoon table salt
1 tablespoon baking soda
1 cup 50% dextrose or corn syrup

Place in one gallon of water. This is enough for one calf. It should be fed at a rate of one quart four times/day.

" Beef Consomme Formula"
1 pkg fruit pectin
1 teaspoon table salt
2 teaspoons baking soda
1 can beef consumme
Add warm water to make two

solution and feed at a rate of two quarts 2-3 times daily depending on the degree of scours.

Q. Should the calf continue to receive milk or milk replacer?

A. No, the calf should immediately be taken off the milk or milk replacer because milk tends to feed the disease causing bacteria and fuel the fire.

Q. What would you now consider the five most important steps you'll want to include in your demonstration and why?

A. Step 1: Take calf off milk replacer.
Why? milk tends to feed the disease causing bacteria and fuel the fire.
Step 2: Prepare and feed electrolyte mixture 8-10% of body weight divided into 3-4 equal feedings daily.
Why? The most important cause of death in scouring calves is dehydration and acidosis. Electrolytes will rehydrate the calf and correct the acidosis.
Step 3: Administer scour medication.
Why? To kill bacteria causing the scours.
Step 4: Be sure the calf is isolated and in a dry, well-bedded, ventilated pen.
Why? Prevent the other calves from getting the 'bug'.
Step 5: Use a heat lamp (in cold weather).
Why? Most dehydrated calves are in shock and the body temperature is below normal.

SUMMARIZE THE ACTIVITY

The demonstrations or skits your 4-H'ers present to the entire group will provide an excellent summary. Encourage everyone to ask questions so the important points are discussed. If time permits, you may want to summarize the meeting activities by showing a slide/tape on the topic available through your county extension office.

PAT ON THE BACK

Give yourself a pat on the back for helping your members not only develop their project skills but, even more importantly, some important life skills. Your ability to sit on your hands and let your members discover for themselves how to identify and treat a scouring calf helps them deal with this and other problems with much more confidence and understanding.

Supporting Activities

Meeting topics which support this activity include:
Caring for the Newborn Calf
Identifying the Newborn Calf
Feeding Your Calf

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4-H Animal Science
Project Meeting Guide, AS-26, '81

DAIRY & DAIRY GOAT

USING PROPER MILKING PROCEDURES

JEFFREY K. RENEAU
Extension Dairy Specialist

IMPORTANCE OF THE TOPIC

Proper milking practices have proven effective in minimizing mastitis and maximizing milk yield. Learning the "whats" and "whys" of proper milking procedures can help develop valuable skills for the young aspiring dairy person. These basic skills, excercised over a lifetime, will yield extra dollars. Why not form good habits? After all, they are as hard to break as bad ones.

WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By actively participating in the project meeting you 4-H'ers will be able to do the following:

1. Outline and demonstrate the steps of proper milking procedures.
2. Tell why each step is important.
3. Develop the life skills of problem solving and demonstrating to others.

PREPARE FOR THE MEETING

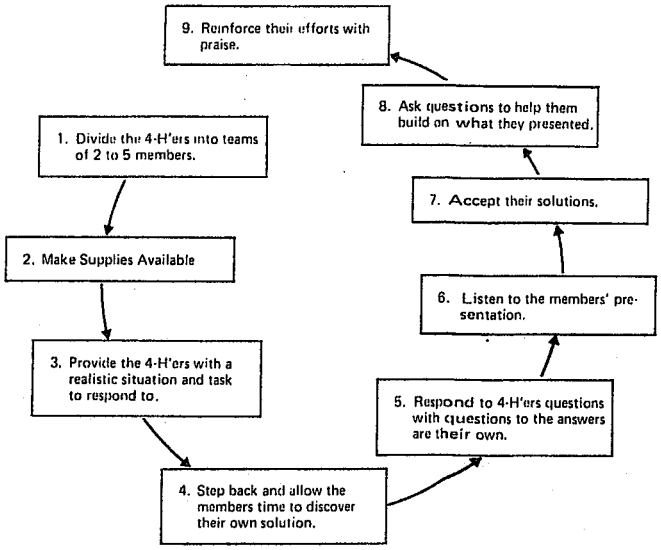
As the 4-H project leader you'll want to be ready for your members when they come through the door. With some prior planning with your members the meeting should be educational for all concerned. A review by everyone of the pages in the 4-H dairy workbook Dairy Cows and Management on milking will provide a basis for the meeting. Often your local milking equipment dealer, creamery fieldperson, or extension office will have additional books and pamphlets available.

Supplies:

Suggested supplies include a gentle cow or simulated udders using calf nipple pails, or plastic AI sleeves filled with water; paper towel; warm water udder wash, post-milking teat-dip, stopwatch or regular watch, and notecards with sentence fragments as indicated under the "Questions to Ask" section.

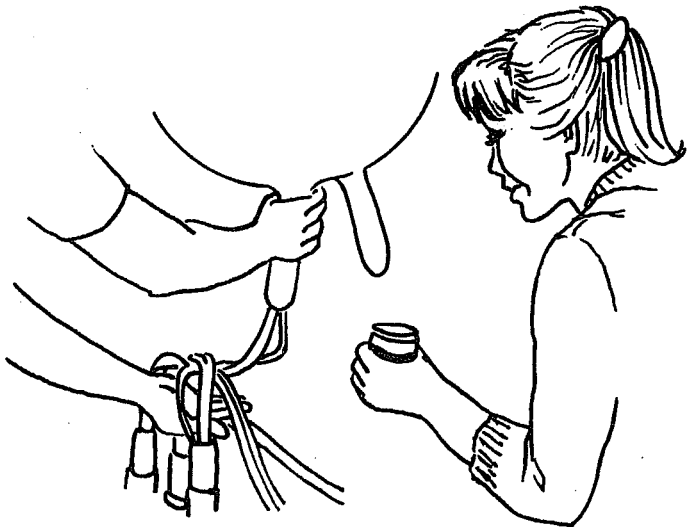
FACILITATE THE MEETING

Several methods may be used to help the members accomplish the objectives of the meeting. Some have a much greater opportunity than others of helping a 4-H'er develop important life skills in addition to learning proper milking procedures.



SITUATION: While your parents are taking a well earned vacation you and your neighbor have the responsibility of taking care of the dairy herd. Your neighbor has no experience milking.

YOUR TASK: Demonstrate to your neighbor the proper steps of milking and explain why each step is important.



QUESTIONS TO ASK

Make questions out of each of the following key steps. Work to respond to a question with a question instead of answers.

WHAT	WHY
1. a. Use separate towels to	—Avoid spread of mastitis between cows
b. Wash udder with warm udder sanitizers to	—Clean udder and stimulate milk letdown
c. 25-30 seconds is	—Time required for proper stimulation
2. a. Use separate towels to	—Avoid spread of mastitis
b. Dry udder to	—Remove excess moisture from udder and teat end
3. Use strip cup to	—Check for abnormal milk and check for adequate milk letdown
4. a. Apply milker to	—Milk cow
b. When teats are firm	—Good milk letdown is indicated
c. Approximately one minute after stimulation is	—Time required for good milk letdown
5. Adjust cups to	—Ensure even milk out
6. a. Quickly machine strip IF NEEDED because	—Overmilking causes teat end irration
b. 15 seconds or less	—Is all time required for mchine stripping
7. Shut off vacuum because	—Removing milker without shutting off vacuum causes teat irritation and milk droplet impacts
8. Remove milker when cow	—Is all milked out
9. Teat dip immediately because	—50% of new mastitis infections are prevented by this practice

SUPPORTING ACTIVITIES

1. An important point can be made in a fun way with one of the two calf nipples partially filled with water and both covered with turkish towel. Have a 4-H'er whom you've told which pail is which demonstrate inadequate stimulation on the empty pail or bottle and recommend stimulation on the filled pail or bottle. Ask the 4-H'er to involve others until the group figures out the secret.
2. Use a stopwatch to time how long the 4-H'ers stimulate the teats and how long a lag time there is between stimulation and application of the milker unit. A milker unit could be used but isn't necessary.
3. Using a stopwatch ask all 4-H'ers after you say "Go" to raise their hands when they think 40 seconds have gone by. Reward the one which comes closest. Have them explain the importance of this exercise in relation to proper stimulation.
4. Make up a group of cards from the list on "Questions to Ask" with a separate "What" or "Why" line on each. Stir them up. Ask the 4-H'ers to work together to put them in order with correct "Why" for each "What". If you have a large goup, additional sets may be useful. Encourage them to use their 4-H dairy workbook as a resource. Let them check each other's order (if more than one set is made) before they discuss it together. This is a good way to summarize the meeting activity.

Additional Topics for Meetings

Meeting topics which support this activity include:
- Manually Cleaning Milking Equipment
- Conducting a Dairy Project Bowl
- Conducting a Dairy Skillathon

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DAIRY & DAIRY GOAT

IDENTIFYING MILK FLAVORS

VERNAL S. PACKARD, JR.
Extension Specialist, Food Science & Nutrition

IMPORTANCE OF THE TOPIC

This activity will help your members develop their sense of taste. In the dairy industry only good-flavored milk can be sold in the market place. One bad lot can ruin a whole tankload.

WHAT YOUR 4-H'ERS WILL ACCOMPLISH

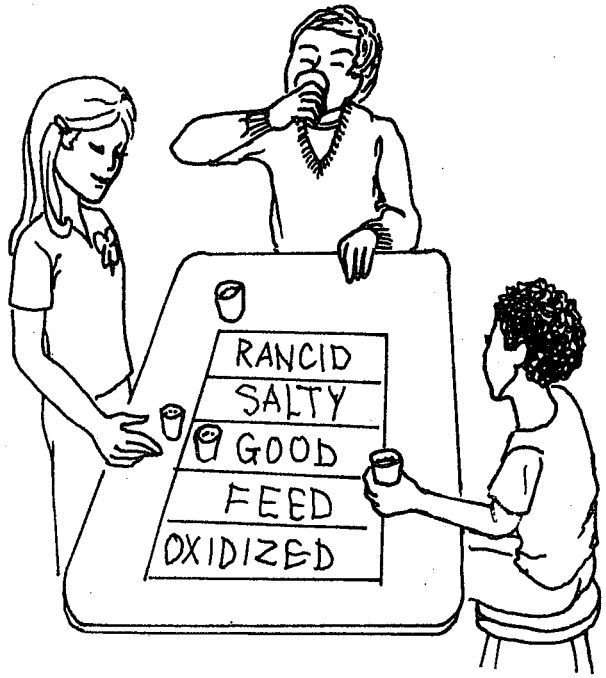
By actively participating in this project meeting your 4-H'ers will be able to do the following:

1. Identify 3 to 5 flavors in milk
2. Prepare samples of off-flavored milks that can be used for practice sessions in flavor evaluation
3. Further develop the life skills of decision making and using knowledge.

PREPARE FOR THE MEETING

You and your 4-H junior leader will want to have the meeting well planned before the members arrive. Supplies which will be helpful include the following:

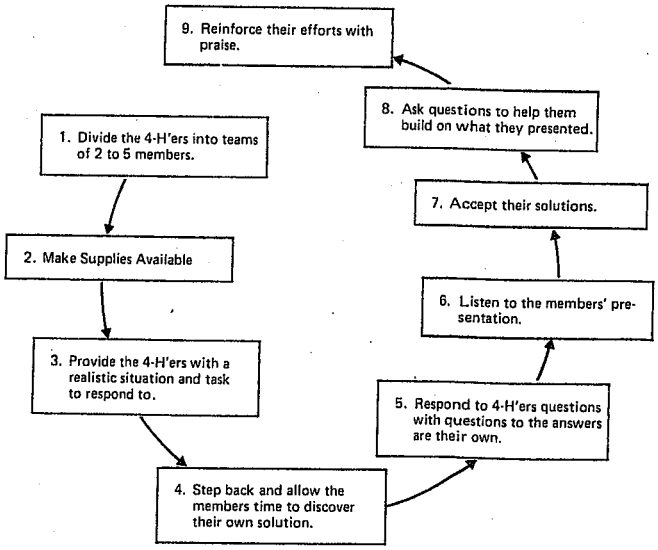
Prepare and have available five samples of various flavored milk. Samples should include 1) rancid, 2) oxidized, 3) feed, 4) salty and 5) good. Milk should be pasteurized and homogenized. Spitoons (plastic bag in a box); sample cups (small, paper, souffle cups) and paper and pencil for jotting down comments.



FACILITATE THE MEETING

This is an excellent learn-by-doing activity. As the 4-H project leader, you can facilitate the learning by making the situation realistic, providing encouragement, and asking questions to help further their understanding. Following this activity, go quickly to an ice cream social.

Here is a teaching method you may want to consider:



SITUATION: The dairy plant is breaking in a new man as quality control director. He tells you that your milk tastes like tobacco, as he rolls a cud around his mouth and sprays between his teeth a long, thin stream of tobacco juice. For some reason, you don't believe him and decide to do your own evaluation.

YOUR TASK: Smell, taste (roll around the mouth), and spit out each sample. Indicate on the paper whether it tastes all right or if off-flavored, describe the flavor in a word.

QUESTIONS TO ASK

After the members have done their best to identify the flavors, follow up with questions. Sometimes the teams participate in a project bowl setting to increase the interest.

Q. What causes oxidized, metallic, or cardboard flavor and how can these be corrected?

A. Exposure to "white metal" or rusty surfaces on milk handling equipment or possibly copper or iron in the water supply. The use of stainless steel, glass, plastic, or rubber on all milk contact surfaces will help correct.

Q. What causes rancid, soapy or bitter flavor?

A. Two causes are milk from late lactation (over 10 months) or low producing cows and agitation and foaming of milk in leaky pipeline milker systems.

Q. What causes feed flavor and how can it be corrected?

A. Eating or inhaling odors of strong feeds (silage, green chop, haylage) prior to milking or sudden changes in feed may cause feed flavors. Possible corrective measures include withhold the objectionable feed until after milking or remove cows from pasture two to four hours prior to milking. Feed should always be changed gradually.

Q. How would you describe the taste of good flavored milk?

A. Pleasant, slightly sweet taste and no odor.

Q. What are additional causes of off-flavored milk?

A. Poorly ventilated housing, dirty barns or cows, cows with mastitis, dirty milk handling equipment, slow or insufficient cooling, medications or insecticides.

Q. For contest purposes, how do you make milk taste rancid? Oxidized? Feed? and Salty?

A. Rancid—Foam raw milk with an egg beater; let stand one hour; pasteurize before sampling.
Oxidized—Add 1 part per million copper sulfate.
Feed—Distill feed flavor into milk.
Salty—add pinch of salt.

SUMMARIZE THE ACTIVITY

Ask each member to tell the group one thing they learned about milk flavors at the meeting. Encourage each one to relate something different. At the next meeting see how many tested their own farm's (or grocery store's) milk.

Supporting Activities

Several activities support a meeting on identifying milk flavors. A field trip to a processing plant, an inspection tour of a farm's milking operation plus other meeting topics may be considered.

Utilizing Proper Milking Practices
Cleaning Milking Equipment Manually
Conducting a Project Bowl
Conducting a Skillathon

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4-H Animal Science
Project Meeting Guide, AS-28, '81

DAIRY & DAIRY GOAT

MANUALLY CLEANING MILKING EQUIPMENT

VERNAL S. PACKARD, JR.
Extension Specialist, Food Science & Nutrition

IMPORTANCE OF THE TOPIC

This topic makes an excellent learn-by-doing activity for a 4-H dairy project group. Cleaning and sanitizing milking equipment are important in maintaining milk of low bacteria count and helping to prevent spread of mastitis. Both are "pocketbook" problems and in need of constant attention. Doing a good job every time is the key.

WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By actively participating in this project meeting, your 4-H'ers will be able to do the following:

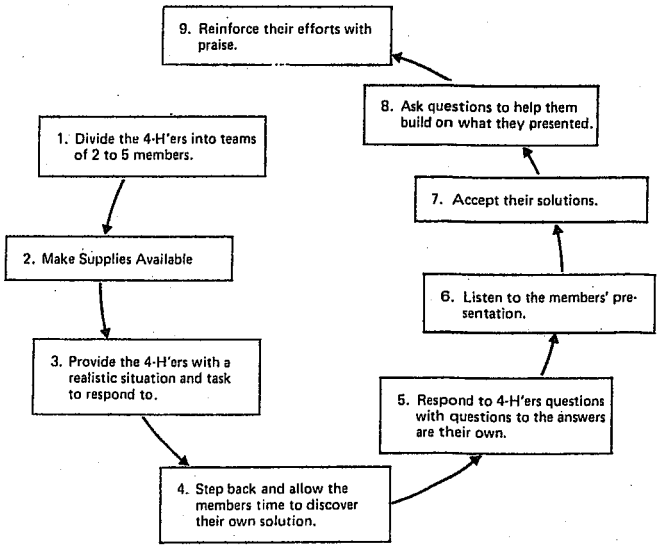
1. Demonstrate how to properly clean (manually) a milking bucket
2. Tell why each is essential
3. Further develop the life skill of working together as a member of a team

PREPARE FOR THE MEETING

Ask your members to bring a milking bucket and supplies to the meeting. Possible supplies include hard bristled brush, stainless steel sponge, dishcloth, brillo pad and perhaps two different detergents, one marked "manual" cleaning and the other "CIP". Also have available a jug or two of sanitizer.

FACILITATE THE MEETING

An easy way to conduct the meeting would be to simply show and tell the 4-H'ers how to clean the bucket and then possibly let them do it the same way. This method limits the opportunities for personal development of the 4-H'er and also limits understanding. Another method often referred to as "Learn By Doing Before Being Told or Shown How" is outlined below. You'll note that the 4-H'ers work together to solve a task and the role of the 4-H leader and junior leader involve supporting their efforts but not directly giving answers or showing.



SITUATION: Just as your mom or dad was about to clean the very last milking bucket after the evening milking, something dairy interesting happened, and though it was udder nonsense, they left right then for the city, leaving you holding the bucket!

YOUR TASK: Demonstrate to your little sister how you would clean the bucket.

QUESTIONS TO ASK

Q. What is the recommended procedure?
A. 1. Rinse bucket in clean, lukewarm water.
2. Fill the wash vat to a level high enough for the entire bucket to be submerged.
3. Read and follow directions in making up the cleaner solution.
4. Wash thoroughly in warm water.

Q. Why is warm water used instead of hot water for rinsing the bucket?
A. Warm water will melt the fat so it can be rinsed away. Hot water will "fix" the protein into the utensil being washed.

Q. What are the directions for mixing the cleaner solution?
A. For purposes of making up the proper concentration of cleaner solution what are the following equal to?
a. 3 teaspoons = 1 tablespoon
b. 48 teaspoons = 16 tablespoons = 1 cup
c. 96 teaspoons = 32 tablespoons = 2 cups = 1 pint
(Note: 1 teaspoon = approximately 1 percent of a pint)
d. 4 cups = 2 pints = 1 quart
e. 16 cups = 8 pints = 4 quarts = 1 gallon
f. 96 cups = 48 pints = 24 quarts = 6 gallons
(Note: 1 cup = approximately 1 percent of 6 gallons)

Instructions on use of some cleaners are in terms of "parts per million" (PPM). *Remember that a 1 percent cleaner solution contains 10,000 PPM.* Thus, if a hypochlorite solution is used and it calls for 200 PPM (1/50 of 10,000), one would use about 2 cups of cleaner per 6 gallons of water.
THIS IS SHOWN ONLY TO EMPHASIZE THE NEED TO FOLLOW DIRECTIONS.

Q. When should the bucket be sanitized?
A. Just prior to milking.

SUMMARIZE THE ACTIVITY

Suggest that your 4-H'ers work up a short skit which will include all the necessary steps. This is usually a lot of fun and allows everyone to get involved. A little encouragement is usually all that is needed.

Supporting Activities

Other meeting topics which help reinforce this one are mentioned below.
Conducting a Project Bowl.
Conducting a Dairy Skillathon.

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4-H Animal Science
Project Meeting Guide, AS29—Revised 1985

DAIRY

DETECTING HEAT IN DAIRY CATTLE

JEFFREY K. RENEAU
Extension Dairy Specialist

IMPORTANCE OF THE TOPIC

A basic understanding of how to detect heat in dairy cattle and its application to successful dairy farming is important for every 4-H member who utilizes artificial insemination. It has been estimated that 50 percent of the heat cycles in dairy cattle are not observed by dairy farmers. When calving intervals exceed 12-13 months, dairy farm income is lost. Estimates indicate that for every day behind 12 months that a cow has not freshened, the cost is $2-$3 per cow per day.

WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By the end of the project meeting the 4-H'ers will be able to do the following

1. Identify the signs of heat
2. Identify the proper time to breed
3. Understand the importance of recording every heat and anticipating the next heat
4. Further develop the life skills of observation and communicating with others.

PREPARE FOR THE MEETING

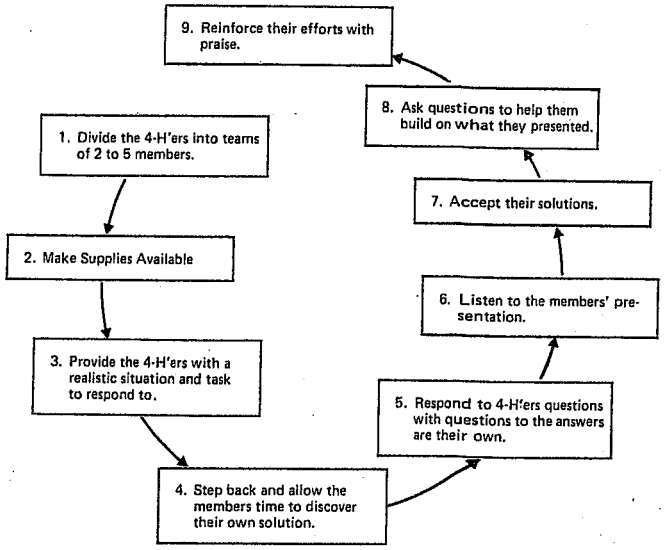
A little preparation will make the meeting enjoyable for all. Ask each 4-H'er to read the information on detecting heat in the 4-H Dairy Project Workbook prior to coming to the meeting. Be sure to invite the parents to attend the meeting.

Supplies to Gather:
4-H Dairy Project Workbook, reproductive records of several cows, a calendar, and the "Steps in Good Heat Detection" put on notebook cards.

FACILITATE THE ACTIVITY

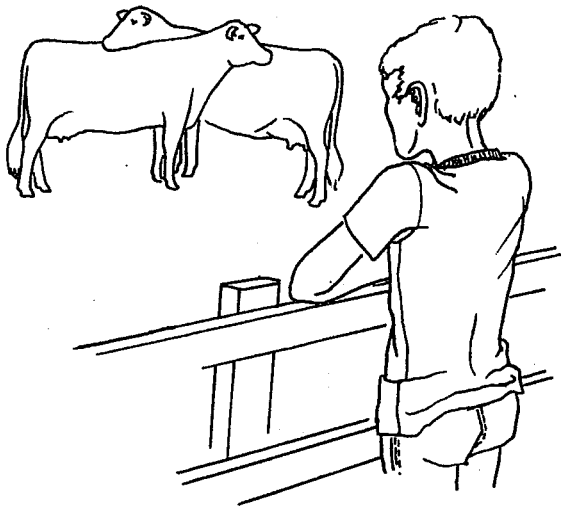
You may have some 4-H'ers who are very familiar with detecting heat. For others, this may be a new area to explore. Your challenge is to allow the members an opportunity to discover for themselves what they know or don't know about the topic. Then let them help each other increase their understanding. Your ability to sit on your hands as well as to ask thought stimulating questions will make the difference between helping them learn and helping them develop an understanding of the topic and of their own abilities.

Here is a method popularly known as Learning by Doing Before Being Told or Shown How:



After providing each team with the 4-H Project Workbook, and reproduction record of one cow per team give them the following situation:

SITUATION: Your dad has gone to a two-day extension meeting and has left you to do the chores. This morning you noticed that while the cows were out exercising,



two cows were riding each other. One of the cows was doing a lot of bellowing and would stand while the other cow rode her.

YOUR TASK: Prepare a short talk on what was happening and what steps you would take. After a few minutes if some teams are stuck, you might want to give them a set of notecards with one of the "Steps in Good Heat Detection" on each one to help them along. Follow up their talks with questions and praise. Emphasis on proper sequence is not necessary as long as they have good reason for what they are doing.

Steps in Good Heat Detection

1. Let cows out of the barn for observation of heat at least once a day.
2. Observe carefully for signs of heat.
3. Mark observations on calendar and in herd reproductive record.
4. Record next anticipated heat.
5. Check freshening date and reproductive health record to see if ready to breed.
6. Call A.I. Technician.

QUESTIONS TO ASK

The following are questions to ask corresponding to each step:

Q. In loose housing, when is the best time to observe heats?
A. Early a.m. and late p.m.

Q. One once-a-day heat detection will result in what percentage of heats being detected?
A. 60 percent.
2X/day heat detection 80 percent.
3X/day heat detection 90+ percent.

Q. What are the signs of heat?
A. Restless, bellowing, reddened vulva, clear mucous discharge, stands while another rides.

Q. Which cow is in heat in this situation?
A. The one standing.

Q. What is the most reliable sign of heat in a cow?
A. Standing while others ride.

Q. Why should all observed heats be recorded?
A. This will make heat detection simple when it comes time to breed the cow back. On the average 50 percent of the heats in dairy cows are missed in this country.

Q. How long is the heat cycle in a cow?
A. 21 days is the average.
18-24 days is the normal range.

Q. When would you begin to look for this cow to be in heat again? (Have members calculate when the cow in this situation will be in heat again.)
A. 3 days prior to anticipated.
21 days since the heat shown by the cow today.

Q. What is the earliest one should begin to breed a cow back after calving?
A. 45 days postpartum.

Q. On the average, when is the best time to begin breeding a cow back?
A. 60 days postpartum.

Q. We are told that in order to maintain the highest possible milk production we should maintain a 12-13 month calving interval. When must we get a cow bred back to be sure she will have another calf in one year? Hint: normally a cow has a 9 month gestation period).
A. 85-95 days after calving.

Q. For most cows, if you first see them in standing heat in the morning, when should she be bred?
A. That p.m.

Q. What if first seen standing in p.m.?
A. The next a.m.

Q. What are two main factors resulting in long calving intervals?
A. Missed estrus cycles and improper timing of artificial insemination.

SUMMARIZE THE ACTIVITY

A 4-H dairy project bowl played with as few as two 4-H'ers (or parents) on a team is an excellent way to summarize the project meeting topic. Use the questions and project materials as guides to questions. Keep the questions and add them into your next set of project bowl questions.

Supporting Activities

Meeting topics which support this activity, include the following:

Selecting a Dairy Sire.
Determining Pregnancy of a Cow.
Understanding the Heat Cycle of Cows.
Inseminating a Cow Artificially.

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DAIRY & DAIRY GOAT

SAMPLING & TESTING LIVESTOCK FORAGE

JAMES G. LINN
Extension Dairy Specialist

IMPORTANCE OF THE TOPIC

Testing forages helps 4-H'ers develop skills in visual appraisal and gain an appreciation of the value of scientific testing. Forages comprise about two-thirds of the dry matter ration of cows. Knowing the nutrient content of forages is the first step in providing cows with balanced rations. The purpose of formulating and feeding grain mixes is to complement the nutrients supplied by forages. Forage testing is the only sure way of knowing the amount of nutrients supplied by forages and consequently formulating the correct grain mix to meet the animal's nutrient requirements.

WHAT YOUR 4-H'ERS WILL ACCOMPLISH

1. Tell why forage testing is necessary
2. Demonstrate how to sample forages properly
3. Apply forage test results in formulating a ration

PREPARE FOR THE MEETING

You'll want to review the resource material available from your extension office as well as collect the supplies needed for the activities indicated. A planning session before the meeting with your junior leader will help make a well organized, exciting learning experience for you and your members.

Resources

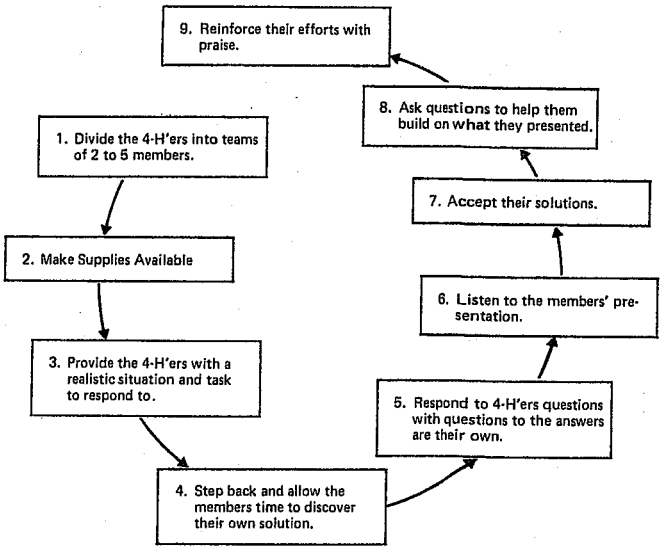
Agronomy Fact Sheet No. 25, University of Minnesota, Sampling and Testing Forages for Feeding value.
Extension Folder 297, University of Minnesota, Interpreting Forage Test Results.
Extension Bulletin 218, University of Minnesota, Feeding the Dairy Herd.

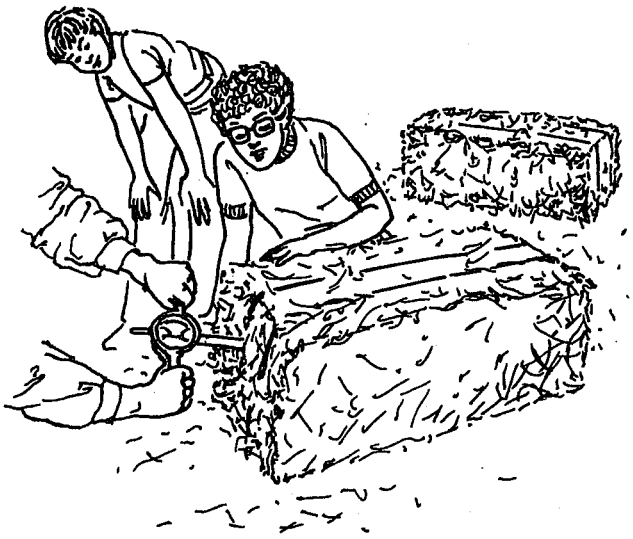
Materials

Three or more samples of forage which have previously been tested; 2-3 bales of hay; bale core.

FACILITATE THE MEETING

Activities which encourage team problem solving often support the member's personal development more than individual demonstrations. You'll find enthusiasm higher and the shyer members more willing to be involved. One method of quickly getting your members to work together is to supply them with materials, divide them into teams, and give the teams a realistic situation statement and a task to work on. Here is how the method looks:





First Activity—Sampling Forages

SITUATION: Your neighbors have asked you to formulate a ration for their dairy cows. They have alfalfa-grass, hay, and corn silage available. You decide to take samples of the forages and have them tested.

YOUR TASK: Demonstrate how you would go about taking samples of these forages.

QUESTIONS TO ASK

When appropriate, encourage the teams by asking them challenging questions as they work to put together their demonstration or skit.

Q. Why is it necessary to use a bale core rather than a slab of hay for getting a sample of baled hay?

Q. Compare samples from two or three bales of hay. Are they similar or different?

Q. Why should more than one sample be taken from a hay mow or stack of hay?

Second Activity—Guessing Forage Quality

Display three or more samples of forages on which you know the actual test results. Then present the teams with a realistic situation and task which fits your group.

SITUATION: Your team feels that it would like to see how close it can come to guessing the actual test results received on some forage samples.

YOUR TASK: Estimate on a piece of paper the dry matter, crude protein, crude fiber, calcium, and phosphorus content of the forages. Compare and discuss your estimates with the other teams and then see how close you come to the actual test results.

QUESTIONS TO ASK

Q. What is an average dry matter content for alfalfa hay? For silage?

A. Hay - 90 percent and silage–25-30 percent.

Q. What is the average crude protein content in alfalfa hay? In corn silage?

A. Hay - 14-18 percent crude protein. Silage - 8-9 percent crude protein.

Q. What is the average crude fiber content in alfalfa hay?

A. 26-36 percent.

Q. What are the average calcium and phosphorus contents of alfalfa hay? Of corn silage?

A. Hay - 1.30 percent calcium and 0.20 percent phosphorus. Silage - 0.27 percent calcium and 0.20 percent phosphorus.

SUMMARIZE THE ACTIVITIES

Ask your members to write down on a slip of paper one thing they learned at the meeting. Throw all the papers in a pile and have each take one and read it in turn. You may be surprised at the responses.

Supporting Activities

Several meetings may be built around the feeds and feeding aspects of the animal production. One or more of these project meeting topics might be used:

Identifying and Classifying Feed Ingredients
Formulating A Dairy Cow Ration
Balancing A Dairy Cow Ration
Understanding A Feed Tag
Understanding Animal Nutrient Requirements.

Issued in furtherance of cooperative extension work in agriculture and home economics, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Norman A. Brown, Director of Agricultural Extension Service, University of Minnesota, St. Paul, Minnesota 55108. The University of Minnesota, including the Agricultural Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, creed, color, sex, national origin, or handicap.

DAIRY & DAIRY GOAT

DEVELOPING 4-H DAIRY PROJECT MEETING KITS

THOMAS D. ZURCHER
Extension Specialist, 4-H Youth Development

THE PROJECT MEETING KIT IDEA

Learn by doing 4-H project meetings in which the members develop both project skills and life skills usually do not just happen without some advance planning. Many times for one reason or another a 4-H project leader is unable to pull together all the supplies and other resources necessary. At times like these the project meeting kit is very helpful. A leader will usually find in the kit a project meeting guide with ideas on how to involve the 4-H'ers, plus training aids and equipment useful in assisting the 4-H'ers with the activity selected. Project meeting guides on several topics are available from County Extension Offices.

The information in this guide is designed to provide ideas to leaders and 4-H agents who are interested in assembling their own kits for project meetings or county use. The goal is for each county to have a readily available library of resources for leaders who want to use them as they meet with their 4-H'ers five or more times during the 4-H year.

USES OF STATE 4-H PROJECT MEETING KITS

Currently over 60 model kits have been designed by the State 4-H and Animal Science Specialists at the University of Minnesota. These kits are primarily in the animal science area. Counties who are interested in using the kits as models or in county leader workshops or skillathons may do so.

RESERVING KITS

Kits may be reserved by contacting the State 4-H Office. Arrangements must be made for transporting the kits to and from the county. Because of the size and weight of many kits, mailing costs would be prohibitive.

PROJECT MEETING BOXES

A supply of specially made boxes which can be used to package county kits are available for counties to purchase at a cost of $1.50 each. Make checks payable to the University of Minnesota. Arrangements for pick up must be made.

4-H DAIRY PROJECT MEETING KITS

Listed below are the kits which have been developed:

1. **Identifying Parts Of A Cow**
   Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign, MN 4-H Dairy Parts Chart, parts T-pins, sponge for pins, cardboard for chart.
2. **Delivering A Calf**
   Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign, model calf, calf delivery box, K-4 jelly, Ivory Flakes, obstetrical equipment.
3. **Caring For A Newborn Calf**
   Kit Contents: Project meeting Guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign, model calf, towel, 7% iodine bottle, sentence fragments as in project meeting guide, colostrum, bottle.
4. **Treating Calf Scours**
   Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign,

model or real calf, scours medication, esophageal feeder or oral calf feeder.

5. **Dehorning A Calf**
   Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign, dehorning equipment, model horns, caustic pot ash, scissors.
6. **Identifying Feed Ingredients**
   Kit Contents: Project meeting guide, Assisting at A 4-H Dairy Skillathon Station guide, situation & task sign, station sign, packet of 9-12 feed ingredients, chips with ingredient names, plates with PROTEIN, ENERGY, WATER, VITAMINS, MINERALS, on them, chips with human food names.
7. **Feeding the Young Calf**
   Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon station guide, situation & task sign, station sign, scales, pail, plastic AI-sleeve.
8. **Identifying Calves**
   Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign, ear tags, applicators, cardboard model ears, tatoo set, ink, Vaseline, small stiff bristle brush, pencil, tissues, towel, piece of chamois.
9. **Using Proper Milking Procedures**
   Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign, plastic AI-sleeve, CMT test kit, teat dip, washrag, disinfectant for water, papertowels, cotton swabs, 7% alcohol, milk from a cow testing CMT-3.
10. **Judging Hay**
    Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign, 4 packets of hay, notecards numbered 1-4, oral reasons notecards.
11. **Presenting Oral Reasons**
    Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign.
12. **Scoring A Judging Class**
    Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign, Hormel Computing Slide, paper, pencils.
13. **Making A Rope Halter**
    Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign, nylon or manila three strand rope, hog rings, pliers, animal puppet head.
14. **Detecting Heat In Dairy Cows**
    Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign, reproductive record, calendar, 6 steps under "Steps In Good Heat Detection" as found in project meeting guide.
15. **Cleaning Milking Equipment**
    Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign, pail, brush, stainless steel brush, sponge, dishcloth, Brillo pad, 2 different detergents, one marked "Manual Cleaning" the other marked "CIP", sanitizer bottle.
16. **Selecting A 4-H Dairy Project Animal**
    Kit Contents: Project meeting guide, Assisting At A 4-H Dairy Skillathon Station guide, situation & task sign, station sign, information cards on 2-4 calves, paper to make a calf selection form, pedigrees, DHIA records, growth chart, weighing tape, health records.

Donor Support

Special thanks goes to the following donors who provided funding to support the development of the kits:

* Minnesota Livestock Breeders Association
* Minnesota Pork Producers
* Minnesota Production Credit Associations
* Cenex Foundation
* Land O'Lakes

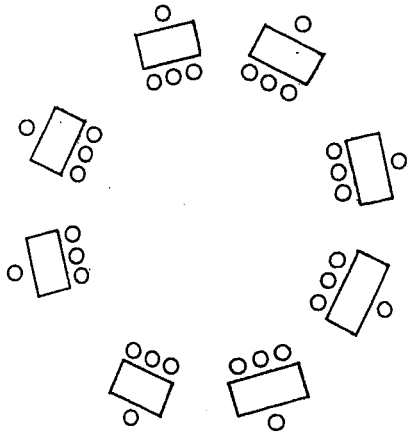
DAIRY

CONDUCTING A 4-H DAIRY SKILLATHON

JEFFREY K. RENEAU
Extension Dairy Specialist
THOMAS D. ZURCHER
Extension 4-H Specialist

WHAT IS A 4-H SKILLATHON?

A skillathon is an excellent method of involving your 4-H'ers and their parents in challenging, noncompetitive, learn-by-doing activities. This method of helping 4-H'ers develop both their life skills and project skills is designed as a series of mini-learning stations with a facilitator at each one (see illustration below). The participants rotate from station to station, attempting to perform the specific tasks given at each station. The station facilitator allows all team members to test their own knowledge and abilities before giving them any hints. This technique is referred to in 4-H as experiential learning or learning by doing before being told or shown how.



A skillathon works well not only during project meetings, but also at the 4-H community club. It is an excellent way to involve several project groups in the program at once. By asking various project groups to set up one or two learn-by-doing stations, the entire club can be actively involved at once. In addition, you can use a skillathon to give recognition to the project groups and their leaders.

The skillathon approach has also been successfully used to strengthen the educational value of county and state fairs. Both adults and youths enjoy the challenge posed by each situation and task.

This project meeting guide briefly outlines how to set up and conduct a 4-H dairy skillathon. Included are a checklist for the planning committee, advice for the facilitator, and suggested supplies, situations, and tasks for each station.

WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By participating in a skillathon your 4-H'ers will accomplish the following:

1. Given a situation and a task, they will be able to evaluate their abilities to solve the challenge presented and discover for themselves what they need to know to do the activity.
2. They will learn to work as members of a team.
3. They will practice making decisions and speaking before others.
4. They will receive recognition and praise for their efforts.

CHECKLIST FOR THE SKILLATHON COMMITTEE

_____ Decide on the stations wanted, considering time and resources available.

_____ Make up a realistic situation and task for each station.

_____ Decide who will be in charge of each station.

_____ Decide on the equipment or supplies needed at each station.

_____ Delegate responsibility for gathering supplies.

_____ Depending on the size of the group and the number of station, group the members into teams of two to four, assigning each team to a station and moving them to the next station every 10 minutes or so.

_____ After all teams have rotated through the stations, have each team select a station and give a short presentation to the entire group on how the team solved the task at a particular station. Let teams choose which station they want to present.

_____ Praise everyone's efforts.

RESPONSIBILITIES OF THE STATION FACILITATOR

You will find it challenging and rewarding to be a helper at one of the stations. The extent to which the participants develop project skills and life skills depends largely on how successfully you relate to them. Here are suggested steps to follow.

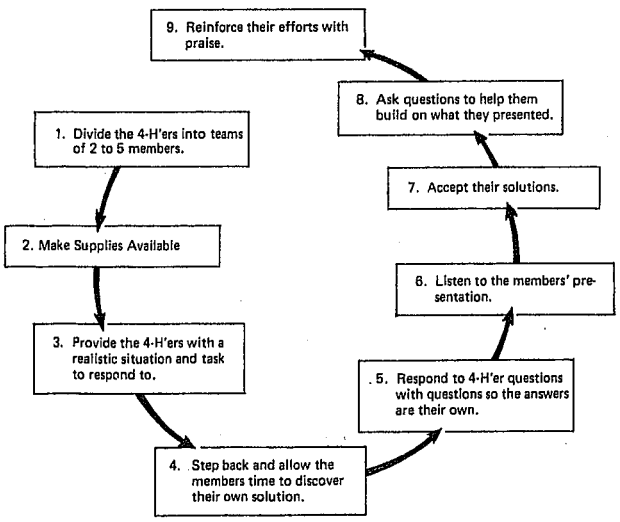
_____ Familiarize yourself with the topic and any available project meeting guides, supplies, and training aids.

_____ Compile a list of questions to ask each team.

_____ Set up your station to include a stand-up situation and task sign and necessary supplies.

_____ Allow the team members to discover for themselves how to accomplish the task, instead of telling or showing them how first.

_____ Facilitate the learning situation for each team in the following manner:



_____ Ask the 4-H'ers how they would set up and conduct this activity at a 4-H project meeting.

_____ Mark the team's participation card if one is used.

_____ Prepare your station for the next team.

_____ Following the skillathon, inventory and pack up all equipment, materials, and signs.

STATION INFORMATION

Suggested topics and ideas for each individual station are listed below. Station topics are limited only by your imagination and interest. The model calf made from the Minnesota 4-H calf pattern can be a useful training aid for several of the station topics. At all stations, try displaying the situation and task information on an 8 x 11" stand-up so that the teams can start solving the task immediately.

You will need the following supplies for each station described: project meeting kit containing the project meeting guide "Conducting a 4-H Skillathon," situation and task signs previously described, a project meeting guide about the topic, and a station sign.

1. Identifying Parts of a Cow

SUPPLIES: Minnesota 4-H Dairy Parts Chart, parts T-pins, sponge for T-pins, cardboard for chart.

DIRECTIONS: Let the members make their decisions and check their own answers. Follow up with questions.

SITUATION: You have been asked to help the younger 4-H'ers in your 4-H dairy project group learn where the parts of the dairy cow are located.

TASK: Work together to match the names with the numbers on the chart.

2. Delivering a Calf

SUPPLIES: Model calf, calf delivery box, K-4 Jelly, Ivory flakes, obstetrical equipment.

DIRECTIONS: Let team members demonstrate how they would deliver the calf. Follow up with questions.

SITUATION: Your 4-H project cow is having problems delivering her calf unassisted.

TASK: Demonstrate how to deliver the calf.

3. Caring for a Newborn Calf

SUPPLIES: Model or real calf, towel, 7% iodine bottle, sentence fragments as listed in the project meeting guide, colostrum bottle.

DIRECTIONS: Let the team demonstrate and follow up with questions. If time permits, have them do the card exercises described under the third question in the project meeting guide.

SITUATION: Your cow has just delivered a beautiful heifer calf.

TASK: Demonstrate what to do during the calf's first 30 minutes of life.

4. Treating Calf Scours

SUPPLIES: Model or real calf, scours medication, esophageal feeder or oral calf feeder.

DIRECTIONS: Let team members demonstrate how they would treat the calf. Follow up with questions.

SITUATION: You notice that one of your 4-H calves has suddenly developed scours. You cannot get to the vet.

TASK: Demonstrate how to treat the calf and tell what steps you would take to prevent scours in the future.

5. Dehorning a Calf

SUPPLIES: Dehorning equipment, model horns, caustic potash, scissors.

DIRECTIONS: Provide the supplies and let the team members demonstrate how they would solve the task. Follow up with questions.

SITUATION: Your neighbor has asked you to dehorn a calf. You agree.

TASK: Demonstrate how to dehorn the calf.

6. Identifying Feed Ingredients

SUPPLIES: Packet of 9 to 12 feed ingredients, chips with ingredient names, paper plates with the words PROTEIN, ENERGY, WATER, VITAMINS, MINERALS written on them, chips with human food names.

DIRECTIONS: Have the teams match the chips with the ingredients. Then have them put each chip on the plate specifying its nutrient category. Ask questions and discuss.

SITUATION: Your local feed store manager has given you some feed ingredients to use in your project group.

TASK: Identify the ingredients and divide them into nutrient categories of energy, protein, vitamins, minerals, and water.

7. Feeding the Young Calf

SUPPLIES: Water, scales, pail, plastic AI-sleeve.

DIRECTIONS: Follow the suggested activities in the project meeting guide "Feeding the Young Calf."

SITUATION: You have been assigned the job of feeding the new calf.

TASK: Demonstrate what and how much to feed the calf and tell why the correct amount is so critical.

8. Identifying Calves

SUPPLIES: Ear tags, applicators, cardboard model ears, tattoo set, ink, petroleum jelly, small stiff-bristle brush, pencil, tissues, towel, piece of chamois.

DIRECTIONS: Let team members choose for themselves what method to use. Follow up with questions.

SITUATION: Following the birth of the calf, you decide to permanently identify it before you put it with the other calves.

TASK: Demonstrate what you would do to make the calf identifiable.

9. Using Proper Milking Procedures

SUPPLIES: Milking machine, model udder, water, plastic AI-sleeve, CMT test kit, teat dip, washrag, disinfectant for water, paper towels, cotton swabs, 7% alcohol, milk from a cow testing CMT-3.

DIRECTIONS: Let the team members demonstrate how they would solve their task. Let them perform a CMT if time allows.

SITUATION: You are home taking care of the herd while your parents are vacationing.

TASK: Demonstrate how to milk a cow and explain why the steps are important.

10. Judging Hay

SUPPLIES: 4 flakes of different quality hay, 4 packets of hay, notecards numbered 1-4, oral reasons notecards.

DIRECTIONS: Let team members complete their task. Work with them as needed, particularly to determine the cuts between the pairs.

SITUATION: Your hay supplier brings over 4 samples of hay for you to evaluate.

TASK: Discuss what makes good hay, judge the samples as a class, and determine the cuts between the pairs.

11. Presenting Oral Reasons

SUPPLIES: 50 oral reasons notecards.

DIRECTIONS: Refer to information on the oral reasons notecard in the kit. Let each member give a complete set of oral reasons.

SITUATION: The parents and members of the 4-H dairy project group are interested in why you placed the hay as you did.

TASK: Using the 4-H oral reasons notecard as a guide, present your reasons.

12. Scoring a Judging Class

SUPPLIES: Hormel computing slide, paper, pencils.

DIRECTIONS: Give the team a scorecard with different placings, and have them study the project meeting guide to figure the class score. If they are still completely confused after a few minutes, walk them through the six steps. Let them check their score using the Hormel computing slide.

SITUATION: One of the 4-H members placed the class of hay differently than you did.

TASK: Help the member figure his or her score on this class.

13. Making a Rope Halter

SUPPLIES: Nylon or manila three-strand rope, hog rings, pliers, animal puppet head.

DIRECTIONS: Provide copies of "Making a Rope Halter" to the team if they need them, and let them make a halter. Have them put on a complete halter on the animal puppet head before leaving the station.

SITUATION: You can't find your favorite calf halter and so you decide to make a new one.

TASK: Demonstrate how to make a rope halter.

14. Detecting Heat in Dairy Cows

SUPPLIES: Reproductive record, calendar, 6 steps under "Steps in Good Heat Detection" as found in the project meeting guide by that name.

DIRECTIONS: Let the team perform this task. Have members put 6 steps in order. Follow up with questions.

SITUATION: Your dad has gone on a two-day extension tour. As you are doing the morning chores, you notice one cow riding another.

TASK: Explain what is happening and tell what you would do.

15. Cleaning Milking Equipment

SUPPLIES: Milking machine (optional), water, pail, brush, stainless steel brush, sponge, dishcloth, Brillo pad, 2 different detergents (one marked "manual cleaning" and the other marked "CIP"), sanitizer bottle.

DIRECTIONS: Provide the team with the "dirty" bucket and equipment. Follow up with questions.

SITUATION: Just as mom and dad are about to clean the last milking bucket after the evening milking, something *dairy* interesting happened, and though it was *udder* nonsense, they left right then for the city, leaving you holding the bucket.

TASK: Demonstrate how to clean the bucket.

16. Selecting a 4-H Dairy Project Animal

SUPPLIES: Information cards on 2 to 4 calves, paper to make a calf selection form, pedigrees, DHIA records, growth chart, weighing tape, health records.

DIRECTIONS: Provide the information and let team members make their choice. Follow up with questions.

SITUATION: You have been permitted to select a calf from the family herd or to buy one from a neighbor.

TASK: Using the selection form and all the information available, select a calf and explain why you selected the one you did.

17. Tying Farm Knots

SUPPLIES: Eight 5-foot lengths of rope, board or other object to which to tie knots.

DIRECTIONS: Let the 4-H'ers try to tie the knot before asking any questions.

SITUATION: You want to brush up on your knot-tying skills before you begin training your project animal.

TASK: Demonstrate how to tie eight different knots, and tell how you would use each.

Acknowledgment

Special thanks go to the Minnesota Livestock Breeders' Association, which provided funding for the development of the training aids and materials used for the seven species skillathons conducted at the Minnesota State Fair as well as for the printing of this project meeting guide.

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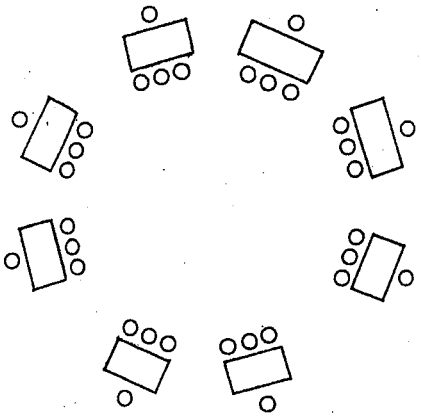
DAIRY GOAT

CONDUCTING A 4-H DAIRY GOAT SKILLATHON

THOMAS D. ZURCHER
Extension 4-H Specialist

WHAT IS A 4-H SKILLATHON?

A skillathon is an excellent method of involving your 4-H'ers and their parents in challenging, noncompetitive, learn-by-doing activities. This method of helping 4-H'ers develop both their life skills and project skills is designed as a series of mini-learning stations with a facilitator at each one (see illustration below). The participants rotate from station to station, attempting to perform the specific tasks they are given at each station. The station facilitator allows all team members to test their own knowledge and abilities before giving them any hints. This technique is referred to in 4-H as experiential learning or learning by doing before being told or shown how.



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The skillathon approach has also been successfully used to strengthen the educational value of county and state fairs. Both adults and youths enjoy the challenge posed by each situation and task.

This project meeting guide briefly outlines how to set up and conduct a 4-H dairy goat skillathon. Included are a checklist for the planning committee, advice for the facilitator, and suggested supplies, situations, and tasks for each station.

WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By participating in a skillathon your 4-H'ers will accomplish the following:

1. Given a situation and a task, they will be able to evaluate their abilities to solve the challenge presented and discover for themselves what they need to know to do the activity.
2. They will learn to work to as members of a team.
3. They will practice making decisions and speaking before others.
4. They will receive recognition and praise for their efforts.

CHECKLIST FOR THE SKILLATHON COMMITTEE

_____ Decide on the stations wanted, considering time and resources available.

_____ Make up a realistic situation and task for each station.

_____ Decide who will be in charge of each station.

_____ Decide on the equipment or supplies needed at each station.

_____ Delegate responsibility for gathering supplies.

_____ Depending on the size of the group and the number of station, group the members into teams of 2 to 4, assigning each team to a station and moving them to the next station every 6-10 minutes.

_____ After all teams have rotated through the stations, have each team select a station and give a short presentation to the entire group on how the team solved the task at a particular station. Let teams choose which station they want to present.

_____ Praise everyone's efforts.

RESPONSIBILITIES OF THE STATION FACILITATOR

You will find it challenging and rewarding to be a helper at one of the stations. The extent to which the participants develop project skills and life skills depends largely on how successfully you relate to them. Here are suggested steps to follow:

_____ Familiarize yourself with the topic and any available project meeting guides, supplies, and training aids.

_____ Compile a list of questions to ask each team.

_____ Set up your station to include a stand-up situation, and task sign and necessary supplies.

_____ Allow the team members to discover for themselves how to accomplish the task, instead of first telling or showing them how.

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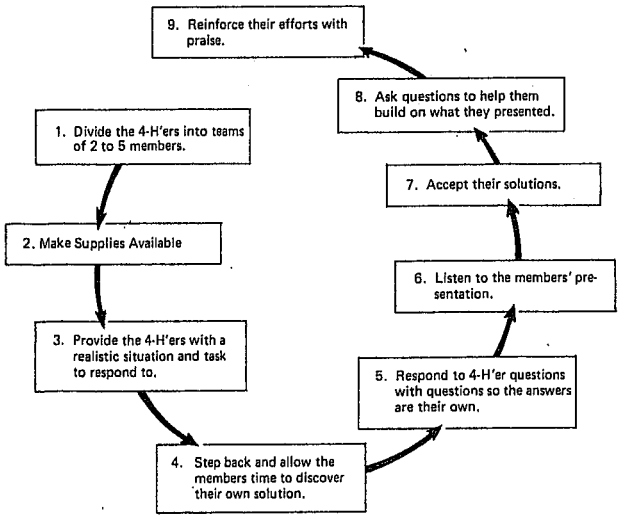


_____ Ask 4-H'ers how they would set up and conduct this activity at a 4-H project meeting.

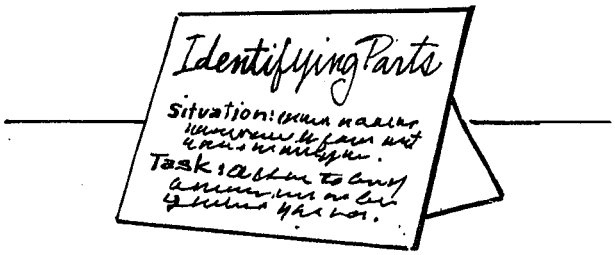
_____ Mark the team's participation card if one is used.

_____ Prepare your station for the next team.

_____ Following the skillathon, inventory and pack up all equipment, materials, and signs.

STATION INFORMATION

Some possible topics and suggestions for presenting each topic at individual stations are included here. Station topics are limited only by your imagination and interest. The model dairy goat made from the Minnesota 4-H dairy goat pattern can be a useful training aid for several of the suggested topics. At all stations, try displaying the situation and task on an 8 x 11" stand-up so that the teams can start solving the task immediately.



You will need the following supplies for each station described: project meeting kit containing the project meeting guide "Conducting a 4-H Skillathon," a situation and task sign as previously described, a project meeting guide about the topic, and a station sign.

1. Identifying Parts of a Dairy Goat

SUPPLIES: Minnesota 4-H Parts Chart, parts T-pins, sponge for pins, cardboard for chart.

DIRECTIONS: Let the teams make their decisions and check their own answers. Follow up with questions.

SITUATION: You have been asked to help the younger 4-H'ers in your 4-H project group learn to locate the parts of a dairy goat.

TASK: Work together to match the names with the numbers on the chart.

2. Delivering a Dairy Goat

SUPPLIES: Model dairy goat kid, dairy goat delivery box, K-4 jelly, Ivory flakes, obstetrical equipment.

DIRECTIONS: Let team members demonstrate how to deliver the kid. Follow up with questions.

SITUATION: Your 4-H project doe is having problems delivering her kid unassisted.

TASK: Demonstrate how to deliver the kid.

3. Caring for a Newborn Dairy Goat

SUPPLIES: Model dairy goat, towel, 7% iodine bottle, sentence fragments as listed in project meeting guide, colostrum, bottle.

DIRECTIONS: Let the team demonstrate and follow up with questions. If time permits, have members do the card exercise described under the third question in the project meeting guide.

SITUATION: Your doe has just delivered a beautiful kid.

TASK: Demonstrate what to do during the kid's first 30 minutes of life.

4. Saving a Weak Newborn Dairy Goat Kid

SUPPLIES: Model or real kid goat, 16" x 15/32" catheter tube, 50cc syringe, bucket, towels, needle and syringe, 7% iodine bottle, cambiotic, 5% dextrose solution, vitamin A & D.

DIRECTIONS: Let the teams demonstrate how they would save the kid. Follow up with questions.

SITUATION: One of the newborn twin goats is lying almost motionless on the snow-covered ground.

TASK: Demonstrate what you would do to save this weak, chilled kid.

5. Dehorning a Kid

SUPPLIES: Dehorning equipment, model horns, caustic potash, scissors.

DIRECTIONS: Provide the supplies and let the team members demonstrate how they would solve the task. Follow up with questions.

SITUATION: You have been asked by your neighbor to dehorn a kid goat. You agree.

TASK: Demonstrate how to dehorn the kid.

6. Identifying Feed Ingredients

SUPPLIES: Packet of 9 to 12 feed ingredients, chips with ingredient and human food names, paper plates with the words PROTEIN, ENERGY, WATER, VITAMINS, MINERALS written on them.

DIRECTIONS: Let teams match the chips to the ingredients. Then have them place all chips on the plate specifying its nutrient category. Ask questions and discuss.

SITUATION: Your local feed store manager has dropped off some feed ingredients for your project group's use.

TASK: Identify the ingredients and divide them into nutrient categories of energy, protein, vitamins, minerals and water.

7. Understanding Feed Tags

SUPPLIES: Feed tags.

DIRECTIONS: Provide the teams with feed tags and let them explain what they read. Ask questions and discuss. Refer to the project meeting guide.

SITUATION: You are in a feed store and a customer sees your 4-H t-shirt. The customer asks your help in understanding a feed tag.

TASK: Explain to the customer what information the tag contains and how it helps in choosing a feed for a flock.

8. Tattooing Dairy Goats

SUPPLIES: Cardboard model ears, tattoo set, ink, petroleum jelly, small stiff-bristle brush, pencil, tissues, towel, piece of chamois.

DIRECTIONS: Let the team choose what method to use. Follow up with questions.

SITUATION: Following the birth of the kid, you decide to make it identifiable before you put it with the other does and kids.

TASK: Demonstrate the method you would use to make the kid identifiable.

9. Using Proper Milking Procedures

SUPPLIES: Model udder, water, plastic AI-sleeve, CMT test kit, teat dip, washrag, disinfectant for water, paper towels, cotton swabs, 7% alcohol, milk from a cow or doe testing CMT-3.

DIRECTIONS: Let the team demonstrate how to solve the task. Let members perform a CMT if time permits.

SITUATION: You are at home taking care of the herd while your parents are vacationing.

TASK: Demonstrate how to milk a doe and explain why the steps are important.

10. Judging Hay

SUPPLIES: 4 flakes of different quality hay, notecards numbered 1-4, 50 oral reasons notecards.

DIRECTIONS: Let team members complete their task. Work with them as needed, particularly to determine the cuts (degree of differences) between the pairs.

SITUATION: Your hay supplier brings over 4 samples of hay for you to evaluate.

TASK: Discuss what makes good hay, judge the samples as a class, and determine the cuts (degree of differences) between the pairs.

11. Presenting Oral Reasons

SUPPLIES: Oral reasons notecards, class of hay.

DIRECTIONS: Refer to information on the oral reasons notecard in the kit. Let each member give a complete set of oral reasons.

SITUATION: The parents and members of the 4-H project group are interested in why you placed the hay as you did.

TASK: Using the 4-H oral reasons notecard as a guide, present your reasons.

12. Scoring a Judging Class

SUPPLIES: Hormel computing slide, paper and pencils.

DIRECTIONS: Give the team a scorecard with different placings, and have them study the project meeting guide to figure the class score. If they are still completely confused after a few minutes, walk them through an example by using the six steps. Let them check their score using the Hormel computing slide.

SITUATION: One of the 4-H members placed the class of hay differently than you did.

TASK: Help this member figure his or her score on this class.

13. Determining a Dairy Goat's Age

SUPPLIES: Dairy goats of different ages or Minnesota 4-H model dairy goat with removable plastic dentures. Paper for drawing and cutting out large and small plastic teeth.

DIRECTIONS: Let the 4-H'ers show and tell how to determine the age of dairy goats.

SITUATION: Your neighbor has asked you to separate his herd into age groups.

TASK: Demonstrate how to determine the ages of various does.

14. Castrating a Dairy Goat

SUPPLIES: A model goat made from the Minnesota 4-H dairy goat pattern, elastrator with rings, burdizzo, emasculator, and knife or all-in-one castrator.

DIRECTIONS: Make the supplies available and let the team perform the task using the method members prefer.

SITUATION: You have been asked to castrate one of your neighbor's buck kids.

TASK: Demonstrate how to castrate the buck.

15. Cleaning Milking Equipment

SUPPLIES: Milking machine (optional), water, pail, brush, stainless steel brush, sponge, dishcloth, Brillo pad, 2 different detergents—one marked "Manual Cleaning" and the other marked "CIP", sanitizer bottle.

DIRECTIONS: Provide the team with the "dirty" bucket and the equipment. Follow up with questions.

SITUATION: Just as mom and dad were about to clean the last bucket after the evening milking, something *dairy* interesting happened, and though it was *udder* nonsense, they left right then for the city, leaving you holding the bucket.

TASK: Demonstrate how to clean the bucket.

16. Selecting Dairy Goats

SUPPLIES: Information cards on 2 to 4 goats, pedigrees, DHI records, a growth chart, health records, and 2 to 4 dairy goats.

DIRECTIONS: Provide the information and 2 to 4 animals if possible, and let the team make their choice. Follow up with questions.

SITUATION: You have been given permission to select a doe kid from the family herd or to buy one from a neighbor.

TASK: Using the information available, select one and explain why you selected that one and not each of the others. Place the entire group.

17. Recognizing Breeds of Dairy Goats

SUPPLIES: Pictures of six breeds, cards with characteristics of six breeds, cards with names of six breeds, key to pictures and characteristics.

DIRECTIONS: Let teams match breed names and characteristic cards with breed pictures. Have members give short talks on the strengths and characteristics of each breed. Then let them check their answers against the key.

SITUATION: You recently showed your city friends each of the different breeds of goats. They want to see how well they remember each one.

TASK: Match the breed names and characteristics with the pictures, and give a short talk on each one.

18. Testing for Mastitis

SUPPLIES: Model udder, water, plastic AI-sleeve, CMT test kit, test dip, milk from cow or dairy goat testing CMT-3 and milk testing normal.

DIRECTIONS: Let the team members demonstrate how to test for mastitis.

SITUATION: You want to test each animal for mastitis.

TASK: Demonstrate how to test for mastitis.

Acknowledgement

Special thanks go to the Minnesota Livestock Breeders' Association, which provided funding for the development of the training aids and materials used for the seven species skillathons conducted at the Minnesota State Fair as well as for the printing of this project meeting guide.

4-H Animal Science
Project Meeting Guide, AS-92, '83

DAIRY GOAT

TATTOOING YOUR DAIRY GOAT

THOMAS D. ZURCHER
Extension Specialist
4-H Youth Development

IMPORTANCE OF THE TOPIC

Learning to tattoo the project dairy goat is an important and necessary management skill. Tattoos provide positive identification for record keeping, protect goats from theft, and are used for registration.

WHAT YOUR 4-H'ERS WILL ACCOMPLISH

By participating in the learn-by-doing activities in this project meeting guide the 4-H members (and parents) will do the following:

1. Demonstrate the steps required to tattoo a dairy goat.
2. Further develop their life skills of working together as a group, presenting a demonstration and gaining self-confidence.

PREPARE FOR THE MEETING

Involve your 4-H members as much as possible in the preparation. The more involved they are, the more interest and enthusiasm they will bring to the activity.

Supplies Needed: Metal ¼" needle, tongs or pliers, india or tattoo ink, petroleum jelly, small stiff-bristle paintbrush, pencil, tissues, a towel, pieces of leather, chamois or cardboard, and a dairy goat. The stuffed dairy goat kid from the Minnesota 4-H Dairy Goat Pattern works well as a training aid for this activity.

Time Required: 30-40 minutes.

Resources: Several dairy goat books have good information on tattooing. A 4-H slide set available through your county extension office is also an excellent resource.

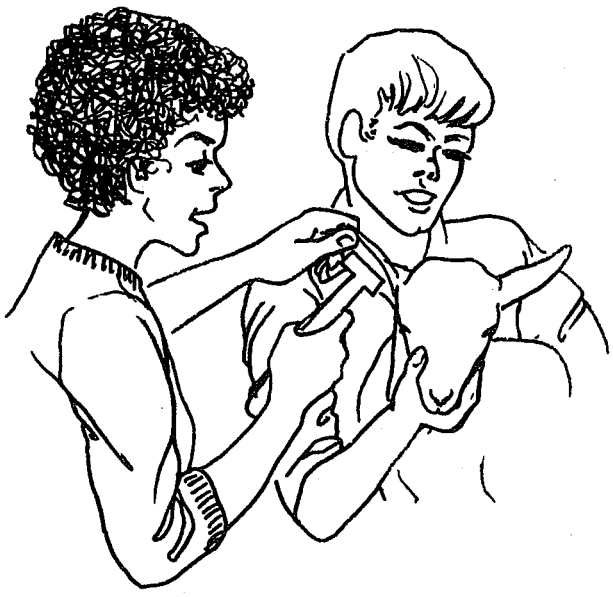
FACILITATE THE MEETING

Your role as a 4-H leader is to help your members discover for themselves how to tattoo dairy goats. Often when members are divided into teams of two or three and provided with supplies, a realistic situation and a task, they will want to attempt the activity. Reinforce their success with praise and help them discover how to do things for themselves by asking them stimulating questions.

Here is an example of how this might work:

SITUATION: You are going to show your dairy goat at this year's fair. One of the rules is that all dairy goats must be tattooed.

TASK: Demonstrate how to tattoo your dairy goat.



STEP BACK AND OBSERVE

Even if some members have no idea what to do, step back and give them a few minutes to work on the task. Then help them along by asking them questions and answering their questions with questions. Work to get the answers from *them* if at all possible.

Initially, it may be easier if members use leather, chamois, or cardboard instead of a live ear.

Questions to Ask

Q: When do you tattoo your dairy goats?
A: When you wean them at six months or older (six months is best).

Q: How many letters or numbers may be put in the ear?
A: The tattoo pliers holds five letters or numbers.

Q: To tell a dairy goat's number, owner, and month of birth, what combination of letters and numbers might you use?
A: Possibly S3921—Severson, dairy goat 39, February, 1981.

Q: What are the steps in tattooing a dairy goat?
A: 1. Pick out the metal number needed and put in the tongs or pliers.
2. Wipe the left ear clean with cotton dipped in alcohol.
3. With the tongs, make a puncture in the smooth part of the ear between two cartilage ribs.
4. Place tongs and metal numbers in a disinfectant.
5. With a stiff-bristled brush, press the tattoo ink into the holes and use the eraser end of a new pencil to force the ink through the holes.
6. Apply a thin film of petroleum jelly over the ink and wipe off with a clean tissue.

Q: What are some potential problems if tattooing is not done carefully?
A: You might hit the large vein in the upper part of the ear, break or tear the ear, place the tattoo upside down, or drop ink in the hair.

Q: How can you make sure the digits will be transferred into the ear correctly?
A: Test by pushing the tongs into a piece of cardboard before applying on the ear.

Q: What if ink gets on the hair?
A: Use petroleum jelly three to four days later, or just let it wear off.

Q: How would you correct a poor tattoo?
A: Using a sharp darning needle, repuncture the holes and repeat the inking steps.

Q: How do you know if it is a good tattoo?
A: You can tell if ink comes through the opposite side of the ear when rubbing with the eraser.

Q: What if a dairy goat has a tattoo in both ears?
A: Generally, the left ear tattoo shows the pedigree number and the right shows its registration number.

Q: If a tattoo pliers is not available, how could a tattoo be made?
A: Use a pen-type tattoo needle to prick the ear in a series of dots.

Q: Where is the earless La Mancha dairy goat usually tattooed?
A: It is tattooed on either or both sides of the tail web. The skin on the side of the tail is pulled tightly out to the side and tattooed in the same manner as the ear.

Summarizing the Activity

Allow all teams to demonstrate how they solved the task. If you have several teams, each one might try to demonstrate one aspect of tattooing. Try putting the tasks in a hat and drawing for them. Encourage everyone to ask questions during demonstrations.

Supporting Activities

*Selecting and Preparing a Dairy Goat for Show

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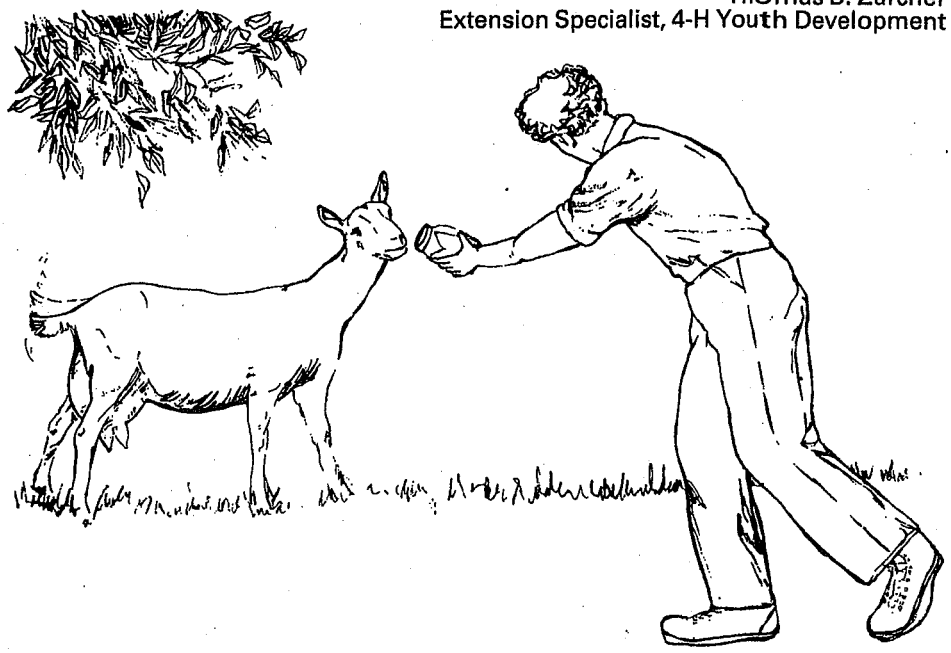
DAIRY GOAT

DETECTING HEAT IN DAIRY GOATS

Maxine Sheldon
4-H Project Leader
Thomas D. Zurcher
Extension Specialist, 4-H Youth Development



IMPORTANCE OF THE TOPIC

Whether your 4-H'ers hand mate their does or utilize artificial imsemination, the ability to detect does in heat is critical to proper management.

WHAT YOUR 4-H'ers WILL ACCOMPLISH

By participating in this activity the 4-H'ers will be able to:

1. Detect heat in dairy goats.
2. Detect standing heat in dairy goats.
3. Develop the life skills of observing animals closely, understanding the life cycle of animal reproduction, and working together as a group.

PREPARE FOR THE MEETING

Supplies needed: note cards, paper and pencil.
Optional: does in heat

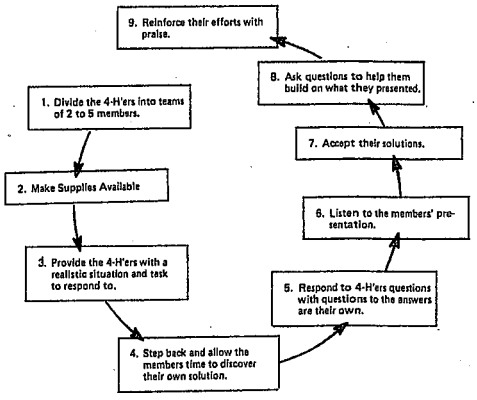
A possible situation and task to use in order to move from a leader centered to a member centered meeting would be:

Situation: Your doeling kid is now 7 months old. You want her to kid when she is 12 months old.

Your task: In your teams, work together and list as many signs of heat as you can on individual note cards. Then put them in order of occurrence before sharing your ideas with another team.

INVOLVING THE MEMBERS

For the members to learn both project and life skills you will want to provide guidance and allow them to discover for themselves how to detect heat in dairy goats before they are told or shown how. A useful procedure to follow is outlined on the following schematic drawing.



After your 4-H'ers have had an opportunity to discuss and debate their ideas, build on what they know by asking appropriate questions. You may have to give part of an answer in your questions to help them figure out what an acceptable answer might be. This takes patience, but the look on a 4-H'ers face that says "I figured it out myself" is well worth it.

QUESTIONS TO ASK

Q. At what age should yearling kids be bred?
A. 7-8 months
Q. When would breeding at 7 to 8 months of age not be advisable?
A. When the animal has failed to reach an ideal breeding weight of a minimum of 80 lbs.
Q. What is the earliest a doe will breed?
A. 2-3 months of age.
Q. What months of the year should you start looking for heat?
A. August through January.
Q. What are the signs of heat and what order do they occur?
A. 1. Increased restlessness in the virgin does. Increased restlessness and a drop in milk production in the producing does.
2. Become noisier and have more frequent bleating or vocalization.
3. Tail twitching or "flagging" begins.
4. The vulva becomes red and swollen.
5. A clear discharge appears from the vulva.
6. Frequent urination occurs.
7. The discharge becomes cloudy and progresses to almost white by the end of the heat cycle.
8. Does mount other does.
9. Does respond positively to the buck rag.
10. Does become overly friendly to their human manager.

Q. How long will the doe be in heat?
A. This can very due to the age of the doe and the typical history of the doe which makes record keeping so important. The standard is usually 12 hours to 48 hours.
Q. At what stage in the heat cycle should the doe ideally be bred?
A. The ideal time is when the doe responds most positively to the buck rag with urination occurring; when the vulva is very red and swollen; and the discharge has changed from clear to slightly cloudy.
Q. How much time does a dairyman spend detecting heat in the herd?
A. 15 to 25%.
Q. How can you prepare your doe for easier heat detection?
A. Recordkeeping is the basis for establishing a normal pattern for this doe plus there are physical things that can be done. The doe should have her tail clipped and discharges from previous heat cycle should be cleaned away and removed so that only current discharges are noted.
Q. What are the advantages of recording previous heat cycles.
A. This would be to establish the normal heat cycle for a particular animal since subsequent cycles are very similar to previous ones.
Q. How do heat cycles vary between a veteran doe and a virgin doe?
A. Virgin does have the tendency to be in heat for a much shorter length of time which results in much more difficulty detecting heat. The symptoms and signs are also not as obvious. The veteran doe sometimes seems to prolong her heat even if she is not bred. If the manager does not catch-on right away she will continue with the heat cycle for another 12 hours just to try to get the message across.

SUPPORTING ACTIVITIES

At the next meeting you may want to have your members compare notes on their experiences in detecting heat in their dairy goats. Perhaps a member with a buck would supply the other members with buck rags so they can use them in their own operations.

Other activities would include visiting a breeder and talking about detecting heat, clipping tails and preparing for heat detection, and designing a recordkeeping system.

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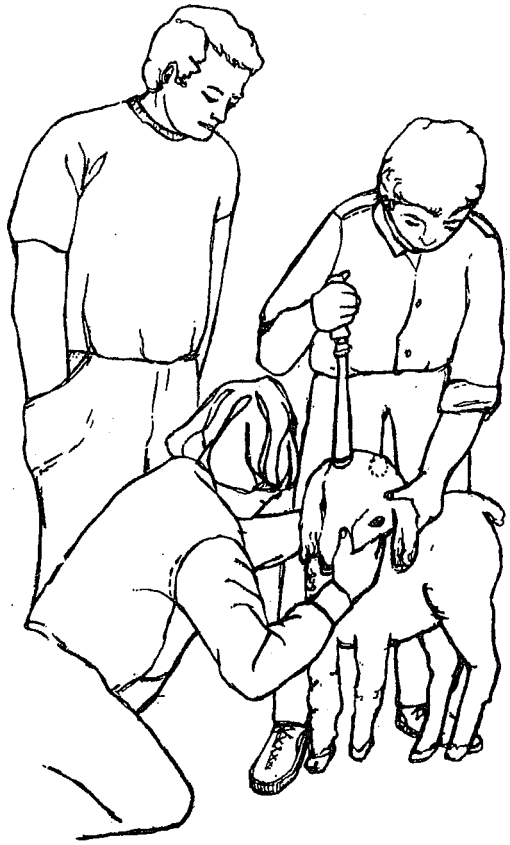
4-H ANIMAL SCIENCE
PROJECT MEETING GUIDE, AS-98, '85

DAIRY GOAT

DISBUDDING A DAIRY GOAT KID

Maxine Sheldon
4-H Project Leader

Thomas D. Zurcher
Extension Specialist, 4-H Youth Development



IMPORTANCE OF THE TOPIC

Disbudding is an accepted and highly encouraged management practice. Sharp horns can inflict bruises, punctures, and lacerations on other goats in the herd as well as humans. In addition any animal that is to be shown must be hornless.

WHAT YOUR 4-H'ers WILL ACCOMPLISH

1. Determine which animals need to be disbudded.
2. Demonstrate how to disbud a dairy goat kid.
3. Develop the life skills of working together as a group, treating animals humanely and developing good management skills.

PREPARE FOR THE MEETING

Supplies Needed: Minnesota 4-H model dairy goat with velcroed buds, disbudding iron, scissors or dippers, antiseptic, ice water. Live animals add reality but are not necessary for this activity.

INVOLVING THE MEMBERS

To start the members thinking about disbudding, ask them a couple of questions such as: "Why is disbudding important?" and "What characteristics does a horned kid have versus a polled one?"

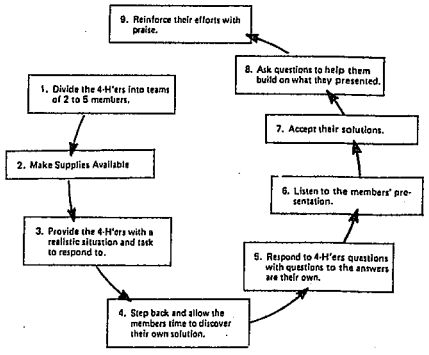
Learn By Doing—After a short discussion give the members an opportunity to show you and the others what technique they would use to disbud a dairy goat. Simply divide them into teams, provide them supplies, and give them a situation and task such as the following to respond to:

Situation: You have a newborn kid and you decide to disbud it.

Your Task: Work together and give a demonstration on how you would disbud the kid.

After you have observed what skills and knowledge each individual 4-H'er has you will be in an excellent position to help him or her build from where he or she is rather than first telling or showing them how by asking questions. In addition, they will have more opportunities to help them develop important personal life skills and gain a feeling of self-worth in the process.

Leaders have found that following the steps diagrammed results in learn by doing member centered rather than leader centered meetings.



Putting the steps in order. Put the following steps on separate notecards and have your 4-H'ers arrange them in order. Follow up with discussion.

Steps: Plug in iron; restrain kid; clip area; check heat of iron; apply iron to bud; check for copper ring; cool disbudding area; recheck heat of disbudding iron; repeat procedure; apply antiseptic.

QUESTIONS TO ASK

Q. What characteristics does a horned kid have which a polled kid does not?

A. A polled kid will have a smooth head without spirals of hair bilaterally located between the ears. The skin is flexible and movable over the entire top of the crown of the head. In a horned kid you will be able to take your finger and move the skin back and forth on the area where the horn bud is located. A swirl of hair will be located over each horn bud. That is the area that a horn button will not necessarily be seen projecting but the skin will be tight and immovable.

Q. If you are not sure whether the animal is polled or horned, should you go ahead and disbud it just to be sure?

A. No. If an animal that is naturally polled is disbudded with a disbudding iron, it can bleed to death.

Q. At what age should you disbud a kid?

A. The best age is between 5 days and 10 days. This is determined by the amount of growth projected through the top of the head. If there is already a 1/2 inch horn button appearing, the disbudding should occur, even at 4 days of age.

Q. How much horn button should protrude through the skin before it is disbudded.

A. Approximately 1/2 inch. To disbud successfully no more than an inch of horn should be showing.

Q. What equipment should be used to disbud a kid?

A. First and foremost is a reliable disbudding iron, a scissors or a clippers, ice water, a clean rag, and an antiseptic.

Q. What is the difference between a disbudding iron and a dehorning iron used on calves?

A. A goat disbudding iron is smaller and it will not do permanent damage to the kid. Calf dehorning irons have a tendency to have too large a base and be too hot.

Q. What problems might happen if the horns are taken off later than ten days?

A. Horn growth may occur on one or both sides which would have to be cut out. Scurs frequently develop on the male offspring. This is very hard to eliminate but if the kid is disbudded at a young enough age this can usually be avoided.

Q. How do you restrain a kid when you are disbudding it?

A. It usually takes two people to successfully restrain and disbud to make sure that safety is maintained for both the animal and the person doing the disbudding. This can be accomplished either by using a disbudding box or having the person helping you physically restrain the animal by holding its head between their legs and supporting the rest of the body so it can't struggle.

Q. What step-by-step procedure would you recommend for disbudding?

A. 1. Determine that the kid is horned.
2. Clip excess hair from around the horn buds at the top of the head and crown of the head so that nothing is showing except the horn buds. Heat the disbudding iron to a red hot temperature and color while doing this.
3. Have your assistant carefully restrain the animal.
4. With gentle pressure apply the hot iron directly to the horn button so that the outside circular edge of the iron goes over the point of the button.
5. Slowly rotate the disbudding iron for approximately 15 seconds on the horn button. Have the person restraining the animal count the seconds.
6. A copper ring should appear around the entire base of the horn buds when the iron is removed. If an area does not contain the copper ring apply a little more pressure on that particular area until the ring is complete.
7. Remove the iron and apply a rag that is wet from the ice water on the top of the horn bud to remove the heat quickly.
8. Relax a couple of minutes until the iron has heated up again and then repeat the procedure on the second bud.
9. Apply an antiseptic ointment or spray.

Q. What happens if the iron is not adequately heated?

A. The treatment will be ineffective and have to be repeated at a later date. This results in added stress to the kid goat.

Q. How do you tell if your disbudding iron is hot enough to use?

A. To determine if this iron is at the correct temperature, before you apply it to the kids head, apply it to a block of wood and see if you leave a burn mark like you would leave with a wood burning instrument. The wood itself should actually char, then you know that the disbudding iron is hot enough.

Q. What are the disadvantages of using caustic to disbud a dairy goat?

A. It is very difficult to restrain a dairy goat kid long enough for the caustic to work effectively without the kid scratching and itching the top of his head with his foot and spreading the caustic paste around. Also, with their long ears, occasionally the ears can flop over into the caustic paste. If the kid is nursing its dam, it is possible the caustic will get rubbed off on an udder. Also, if too much caustic is applied, it can eat down too deeply into the skull tissue.

SUPPORTING ACTIVITIES

Several additional project meeting topics which emphasize managing dairy goats include the following:

Castrating, Giving Medication, Tattooing, Trimming Hooves, Restraining

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DAIRY GOAT

CALENDARIZING DAIRY GOAT MANAGEMENT PRACTICES

Maxine Sheldon
4-H Project Leader

Thomas D. Zurcher
Extension Specialist, 4-H Youth Development

IMPORTANCE OF THE TOPIC

Proper management of the doe is essential in order to maximize returns and allow 4-H'ers to have a positive experience. This activity will provide the members with a one year overview of the various management practices they can anticipate performing. The questions raised as a result of this activity will lead to many individual project experiences on a wide variety of topics.

WHAT YOUR 4-H'ers WILL ACCOMPLISH

By the end of the project meeting your 4-H'ers will be able to do the following:

1. Identify important management practices for each month of the calendar year.
2. Further develop the life skills of working as a member of a team.
3. Develop organizational skills and gain self confidence with dairy goat operations.

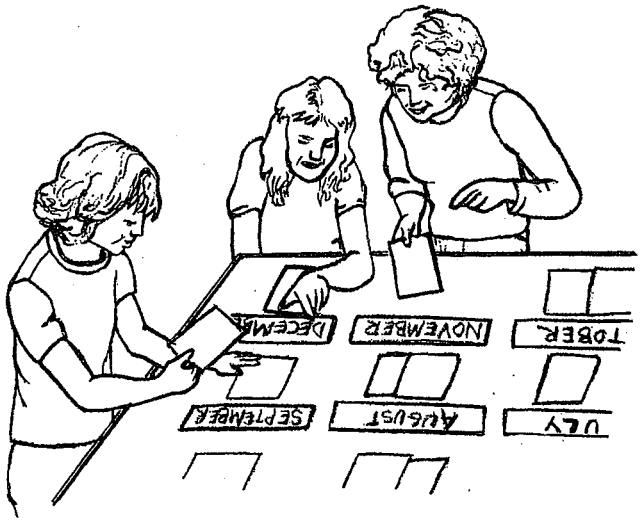
PREPARE FOR THE MEETING

Using the management practices listed plus any additional ones you feel are important, make up a note card for each practice. Simply write the appropriate month on one side and one of the practices for that month on the other side. You will end up with approximately 50 cards. Twelve additional cards—one for each month should also be made. This can be done ahead of time or by the members at the meeting.

INVOLVING THE MEMBERS

Roll Call Idea: Have each 4-H'er name one management practice which pertains to the doe and the month in which it normally occurs.

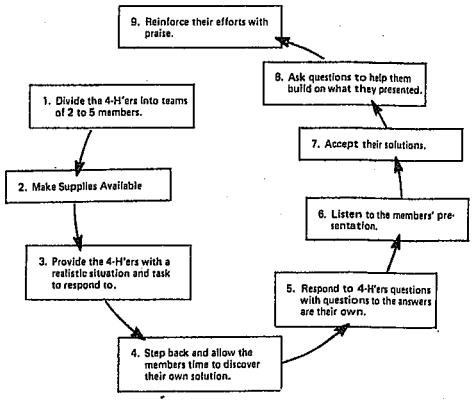
Meeting Idea: Leaders have used several ways to actively involve 4-H'ers in calendarizing management practices. Here are some possibilities:



1. **Matching**—This is a good way to find out what your 4-H'ers know before having a general discussion. The experiential learning model which follows is an excellent way for you to become a "coach" instead of an up-front teacher. The members will also have an opportunity to develop their own skills. A possible situation and task follow:

Situation: You want to organize your management practices for a two-year-old milker which has been bred the second week of November.

Your Task: Plan a 12-month management program by matching the month with the practices pertaining to the doe (not the kid).



Provide each team with one set of completed note cards. After each team has completed the task, have them check another team's. After a discussion of differences, have each team turn their own cards over to see if the cards match the months they have been placed under. Again follow with discussion.

September
Start 4-H records
Treat doe for worms
Late summer hoof trimming
Treat for external parasites
Begin detecting heat
Consult record profile and update

October
Prepare for breeding—clip tails
Heat detection
Weigh or measure to determine readiness to breed
Make arrangements for breeding services and/or choose buck to use

November
Plan the breeding
Heat detection and breeding of does
Late fall hoof trimming

December
Check for recurring heat and breed if necessary
Check for physical changes which may indicate pregnancy
Winter proof the barn (with adequate ventilation)

January
Early winter hoof trimming
Establish exercise pattern
Check for pregnancy (physical changes)

February
Maintain adequate exercise
Perform a CMT (California Mastitis Test)
Dry up milking doe

March
Late winter hoof trimming
Dry treat and CMT questionable does
3rd Week—vaccinate for entertoxemia and tetanus
Observe closely for pregnancy toxemia and ketosis

April
Dairy clip including udder and tail
Observe for physical changes leading to kidding
Prepare kidding area
Make arrangements for someone to observe doe two to three times per day
Review manuals on kidding and assisting in kidding
Assemble kidding supplies
End of 2nd week—deliver kid
Remove kid from doe
Establish milking pattern and routine

May
Challenge feed doe for maximum production
Mid-spring hoof trimming
Spring internal parasite control
Yearly brucellosis TB testing

June
External skill care including clipping and external parasite control
Gradual change in roughage feeding to include some pasturing

July
Summer hoof trimming
Showmanship training for doe
Show clip for county fair

August
Prepare doe for state fair
Complete 4-H records

2. **Quiz Bowl**—Divide into two or more teams and conduct a quiz bowl. The moderator could first read a management practice and a team would respond with the month. Five points for correct answers and negative two points for incorrect answers. Bonus questions could be made by asking something like "Name three management practices which should be done in March." Three points could be given for each correct answer.
3. **Skillathon**—By using the matching activity a skillathon station could be set up. This station would then just be one of several stations in the skillathon. Ideal for community club meetings, project days, and fairs.

SUPPORTING ACTIVITIES

Several of the management practices listed make excellent learn-by-doing, project meeting or individual activities.

Ideas include:

Treating External and Internal Parasites
Detecting Heat
Making a Record Profile
Trimming Hooves
Checking for Pregnancy
Checking for Mastitis
Clipping

ACKNOWLEDGEMENTS

Special thanks are extended to the Minnesota Dairy Goat Association for the support provided to the 4-H dairy goat project.

A notebook containing a set of over 125 additional animal science project meeting guides may be ordered from Communication Resources/Distribution, 3 Coffey Hall, University of Minnesota, 1420 Eckles Avenue, St. Paul, MN 55108.

DAIRY GOAT

PREPARING FOR 4-H DAIRY GOAT SHOWMANSHIP

Thomas D. Zurcher
Extension Specialist, 4-H Youth Development
Maxine Sheldon
Volunteer Leader

IMPORTANCE OF THE TOPIC

For many 4-H'ers the showmanship class is the highlight of their fair experience. Even though their animals may not be of the same conformation as other 4-H'ers animals, they know that they have the same opportunity to do well since the emphasis is on the member's ability to fit and show the animal to best advantage rather than the animal itself.

Because of this popularity, showmanship offers excellent opportunities for learn-by-doing project experiences which are aimed at helping members develop self esteem as well as showmanship skills.

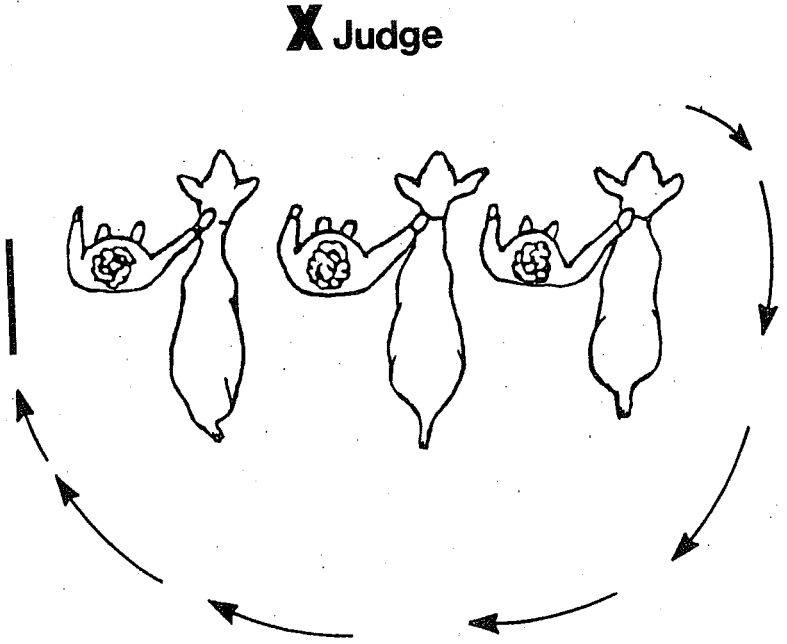
WHAT YOUR MEMBERS WILL ACCOMPLISH

1. Demonstrate how to clip a dairy goat for show.
2. Demonstrate how to show a dairy goat.
3. Develop the life skills of working together, discovering solutions to challenges, and dealing with a competitive situation.

PREPARE FOR THE MEETING

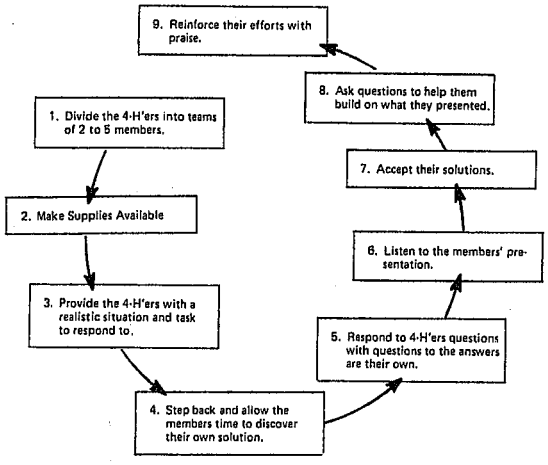
One dairy goat for each 2-3 members would be ideal. However, the activities could be done with only 1 or none, live dairy goats. The model kid made from the University of Minnesota dairy goat pattern may also be used.

Additional supplies needed to allow the 4-H'ers an opportunity to actually practice their skills include collars or small linked chain; pruning shears, pocket knives or files for trimming hooves; large and small electric clippers with a plucking blade and five blade, dog trimmers and blunt pointed scissors; brushes, soap and bucket for washing, and stanchion or low platform. Although important to properly prepare for showmanship, activities on tattooing and dehorning are not covered in this guide.



INVOLVING THE MEMBERS

To allow the members an opportunity to discover both how and why they need to perform certain activities, leaders have found that instead of demonstrating and lecturing how and why, a little time spent allowing the members to discover their own solutions really pays dividends. Not only are the members often more enthusiastic, but they also have an opportunity to develop important life skills which can be transferred to other challenges they will face. The following diagram illustrates a methodology you as the leader may find helpful in order to move the group from a leader-centered to a member-centered experience.



You're right. This experiential method will probably take more time but you will be able to quickly find out what the members already know so you can help them build from where they are as you strive to share your expertise with them.

After a short discussion on the purpose of the meeting the 4-H'ers should be ready to show you what they can do.

Activity 1. Training Your Dairy Goat. Give each team the following situation and task:

Situation: You are determined to train your goat to lead easily and stand quietly while being handled and "set up."

Your Task: Work together and prepare a demonstration on your technique for teaching your dairy goat to lead and set up.

Following each team's demonstration ask a couple of questions and encourage others to do so. Samples of questions are included under Questions to Ask.

Activity 2. Clipping. A short session on safety, with a junior leader using the clippers, is usually all that is needed before the teams clip on their own.

Situation: With just 2 weeks to go before the show, you decide to clip your dairy goat.

Your Task: Demonstrate and tell how you would give your dairy goat a "summer clip."

Instead of each team giving a complete demonstration, ask each one to demonstrate how they clipped a certain part or parts.

Activity 3. Hoof Trimming. Have each 4-H'er carefully examine a hoof to determine where the growth rings are located so the trimming can then be done parallel to these rings.

Situation: One week before the show you do your final hoof trimming.

Your Task: Demonstrate and explain your hoof trimming technique.

Activity 4. Showing Your Dairy Goat. With a volunteer judge, conduct a short showmanship practice session. Every minute or two ask a 4-H'er or a member of the team to explain or show how a particular move is made, why they are doing something, or ask other questions which will get points across. Allow several 4-H'ers to rotate into the judging position.

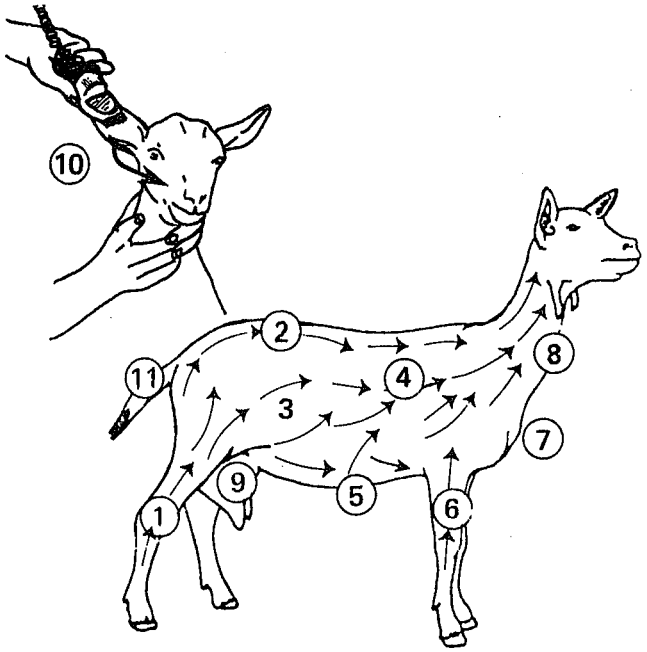
QUESTIONS TO ASK

Training:

Q. How long should each training session be?
A. Usually no more than 5 minutes daily, right after feeding time.
Q. How do you first get the goat to move forward?
A. With the collar in one hand gently push on her rear end with the other hand.
Q. What are a couple of different methods of "setting up" a doe?
A. One method is to gently grasp the leg with your hand and place in the square stance desired. Always set the legs nearest the judge first. Another method is to walk the doe into position and then adjust the leg position by pushing at the point of shoulder to cause the opposite hind leg to move into place. The hind legs should be stretched slightly to accentuate body length and level the rump if need be.

Clipping:

Q. Which direction should the goat be clipped?
A. Always clip from the rear toward the head and neck against the hair.

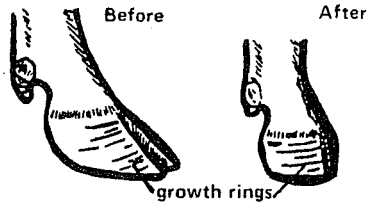


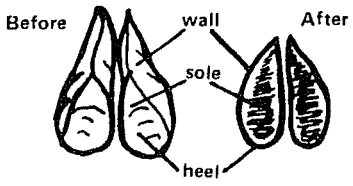
Q. Where are the small clippers used?
A. To clip the udder.
Q. Where are the scissors used?
A. On the long hairs in the ears.
Q. How should the tail be trimmed?
A. Leave a brush-like effect at the tip.

Q. What is the difference between a summer clip and a winter clip?
A. The summer clip or show clip is done with a five blade over the entire body 2 or 3 weeks before the show and again on the head, tail, belly, lower legs, and udder just before the show. Only the head, tail, belly, lower legs, and udder are clipped for the winter clip.

Hoof Trimming:

Q. Why should the hooves be trimmed parallel to the "growth rings"?
A. The hooves will then be level and square so the goat will walk straight and correctly.
Q. What the the basic steps to trimming a healthy hoof?
A. 1. Cut off the overgrown wall level to the sole until a slight pinkness can be seen.
2. Use a file to smooth down the sole. Continually check to see that it is level from both the front and the side.





Showing:

Q. In relation to the judge where should the doe be?
A. Always between you and the judge.
Q. Which direction do you go when you need to change sides?
A. Around in front of your goat.
Q. In which direction do the animals walk?
A. Single file clockwise around the circle with approximately two feet between the animals in the ring. The walk should be slow and dignified with the doe's head slightly elevated.
Q. How should you reposition your animal to another place in line?
A. Walk forward out of the line rather than backing up.
Q. What are the major categories and point values of the ADGA Dairy Goat Showmanship Score Card?
A. Appearance of Animal—40 points
(condition; hair clean and groomed; hoof trimmed and shaped; neatly disbudded and entire body clipped; and entire body clean and free from stains)
Appearance of Exhibitor—10 points
(clothes and person neat and clean with costume preferred)
Showing Animal in the Ring—50
(leading, pose and show, change of placing; to best advantage; poise, alertness and courteous attitude)
Q. What do you do when the judge changes your placing while in a line?
A. Lead the animal forward out of line, down or up to the place directed, then back through the line, finally making a U-turn to get into position.

ACKNOWLEDGEMENTS

Florida Cooperative Extension Service Publication 4H 229 *Fitting and Showing 4-H Dairy Goats* by Dr. Barney Harris, Jr. Extension Dairyman.

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Since 1904 the American Dairy Goat Association has been serving the dairy goat industry.

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Dairy Goat Export Marketing

The developing world has a demand for breeding goats from the United States. The most frequently requested breeds are Alpines, Saanens, and Nubians. Our goat industry has marketing advantages over many other countries by offering records from organized programs such as DHIR Linear Appraisal and our competitive shows, which do not exist in most other countries.

These programs help us to identify animals that can provide improved genetics for the countries desiring to purchase our breeding stock. Participation in these programs provides an edge for the breeder wishing to export stock and establishes them as an excellent source of breeding stock.

General Information Regarding Exporting

There are many complicated steps involved in exporting so it is a business to approach carefully. Even experienced exporters can lose significant amounts of money when problems occur. Delays in shipping, unexpected results from required health testing, quarantine requirements, delayed payments, and unexpected expenses are just a few of the issues that may surface. However, the potential for profit

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and the rewards of selling quality stock to a grateful buyer can outweigh those concerns. Therefore, it is important to follow guidelines that will ensure success.

Cost Factors in Pricing Export Sales

- Setting or accepting the purchase price that will cover your costs is one of the first necessary steps. The obvious costs include:
- Purchasing additional animals
- Transportation (freight) 'Personnel and equipment needed
- Translation costs
- Fees charged by consultants and freight forwarders (individuals or companies that arrange transporting and delivery of animals to foreign buyers)
- Health testing
- Payments to regulatory agencies such as the Animal Plant and Health Inspection Service
- Loading and unloading animals (including overtime for weekend and holidays)
- Air conditioning for loading during summer months
- Quarantine facility charges
- Commissions for agents in other countries
- Additional feed and veterinary costs for keeping the animals longer than anticipated.

Somewhere in the price quotation a profit factor should be in place. If you are selling your own breeding stock you have to consider your own level of profit desired. If you are marketing for others, the acceptable margin could be less depending upon the quantity of animals purchased.

Terms of Sale

It is very important to understand the delivery terminology:

FOB is "Free on Board." If your price is FOB to the port of export of JFK, it would include all costs of getting the animals to the quarantine station at JFK. If you have FOB to a named port and aircraft, it would include prices of delivery upon an aircraft provided by the buyer. This would then include costs of quarantining at the port of export.

C and F or CNF. This means the cost and freight to a named overseas port of import. This would include the price for the animals (and all incidentals) and the cost of transportation to the named port where the animals are delivered.

CIF. This means cost, insurance and freight. Using this term means the seller quotes a price for everything. The insured value is 100% or 110% of the total net invoice value. This could include insurance that is either Farm to Farm or Farm to Farm plus 30 days after delivery. This should also specify whether mortality or abortions are included.

Proforma Invoice. This is the official name of the "quote" and would specifo the buyer/seller names, status of insurance, method of shipping, method of payment, description of animals, specific charges, period of validity (how long your offer is valid) and approximate shipping date.

Methods of Payment

CH or Cash in Advance. This is the most desirable and is the usual method for domestic sales. However, unless it is a small order, it would probably not be acceptable to a foreign buyer.

Letters of Credit This is the most common method of payment. A document is issued by a bank at the buyer's request in favor of the seller. It promises to pay the specified amount upon receipt by the bank of certain documents. This is usually an "irrevocable" Letter of Credit, but these can actually still be revoked. To "confirm" the Letter of Credit means that a U.S. bank accepts responsibility to pay regardless of the financial situation of the buyer or foreign bank. This is desirable but also carries a charge.

Site Visits

Once the buyer and breeder/seller have agreed on the terms and specifics of the sale, the buyer may want to come to your farm and personally select the stock. This has advantages and disadvantages. As a seller, it is helpful when the buyer sees the animals and is satisfied with them, however, as an organizer of a sale of many animals from other herds, this can mean tremendous organizational efforts to coordinate the travel plans to visit other herds if numerous buyers and sellers are involved. This could mean spending a great deal of time on the road as an escort, and could be an important factor in your pricing scheme, Once a buyer has established working relationships with you and is satisfied with what you have located, it

can sometimes mean that future deals can be conducted without his having to personally select. Therefore, it is important to maintain the level of quality expected by the buyer.

Animal Health Issues

With an average of 10-25% of the animals being rejected due to animals being eliminated based on undesirable health test results, it is wise to prescreen animals before putting them into quarantine. This is yet another risk and cost. You could work with an approved facility for quarantine at some site away from your farm, or perhaps you feel that you have a facility that meets the requirement. However, an accredited USDA veterinarian must inspect the facility each time a quarantine begins. During this time, no visitors are allowed in the facility, and cleaned and disinfected boots and coveralls are expected to be worn by those working with the animals. As well, bringing new goats onto your farm will increase your risk of disease within your own herd. On the specified day, an accredited veterinarian draws the blood samples for the necessary testing (which varies by country). Within a few days, the results will be known. If there was a statement in your Letter of Credit that prohibited partial shipment, then you cannot ship the animals or collect the money if there is even one animal less than the number specified. This possibility underscores the importance of testing a sufficient number of animals, and for requesting to remove any prohibitions or penalties for partial shipment. Even if all goes well with the blood testing, there can be delays in the shipment from the buyer's end. This could mean feeding and caring for the animals much longer than you planned and, if the time limit for the health testing expires, you may have to start all over.

Transportation & Final Inspection

Once animals are finally ready to be shipped, transportation to the port of embarkation is only after the animals are again inspected by the USDA veterinarian. One animal with a sign of disease could prohibit the entire shipment from leaving. All paperwork must be absolutely complete, accurate, and endorsed by a Federal Veterinarian. The animals need to be identified by tattoo and sometimes by ear tag as well.

Here is a link to the health protocol for various countries. In some countries, there is no agreed upon protocol, and a permit will be necessary from the importing country, that states the specific tests required:

http://www.permanent.access.gpo.gov/lps3025/index-82.htm

Here is a link to a glossary of export terms:

http://www.aphis.usda.gov/export/vsgloss.html

Working with a Broker

Most breeders prefer to simply work with a broker who is putting together an order, and just sell them goats. This certainly has the least risk. Under this type of arrangement, deals can vary significantly. For example, health requirements vary by country. Tests could include CAE, Bluetongue. Johne's, Vesicular Stomatitis, Brucella abortus. Brucella ovis, and Leotosoirosis. The tests must be conducted within specific time frames, such as within 15 or 30 days of shipment. Some countries require vaccinations for diseases such as Soremouth, and some require 4 weeks or more of isolation. Frequently, a TB test is conducted at the farm, and a prescreening test for CAE is done at the same time. Then, those that pass these tests are eligible to be purchased. At the specified time, the animals are either picked up or the owner delivers them to the quarantine area. Sometimes the broker will cover part or all of the prescreening lab work, while the owner covers the cost of the TB and blood drawing. This can vary but is generally specified in information provided to the seller, along with other instructions. It is important to weigh these costs and risks when considering whether or not the offered price is worth the time and money you will receive.

General Suggestions

If you decide to market your animals for export, here are some suggestions:

- Don't expect export sales to be a "dumping ground" for animals of poor quality. Selling poor animals hurts all breeders and could reduce export markets in general.
- Expect delays. Often there is a "hurry up and wait" situation. We hurriedly work to identify and locate animals according to the buyer's or the broker's wishes and then the usual delays happen. One must be patient with the process. Realize that deals aren't guaranteed sales until the animal leaves the farm

Many things can happen that could jeopardize the final closing of a sale.

- Be willing to accept reasonable prices. In some cases you may be given a deposit first, and final payment only after you provide all the appropriate documents (such as registration papers, interstate shipping papers, production and appraisal records, etc.). Final payment may also be held until animals are actually shipped.
- Follow directions carefully. Thoroughly read and understand all documents provided. If you have questions, ask them. If you are told to have your veterinarian draw blood on a specific day, make sure this is followed carefully. Otherwise, it could risk your potential to sell animals and put the entire shipment in jeopardy if the expected number of animals cannot be sent.
- Check tattoos. If the papers and tattoo do not match, the animal cannot be sent.
- Trim feet.
- Be willing to be flexible in delivering or having your goats picked up at all hours of the day and night.
- Participate in DHI and Appraisal programs. Many buyers require DHI dam records on purchased stock or signed testimony that the dams have produced milk at a particular level. Generally, there are minimum levels stated and sometimes the levels are based on ME's (Mature Equivalents).

Summary

Being part of a successful export program can be satisfying to the goat breeder. Handling the comprehensive and complex details of working directly with foreign buyers certainly isn't for everyone. Even with years of experience in anticipating potential risk, there will be problems. All of us can work together and benefit by marketing our quality breeding stock to buyers in other countries who see the potential for the industry. It can be a great deal of work (but the satisfaction of seeing the goat used effectively for her products can be immensely rewarding, and the income can help sustain one's farm operation. Disclosure: ADGA is providing this document as information to assist members with understanding more about the process of exporting their dairy goats and assumes no responsibility for information that may change or no longer be applicable. Please consult appropriate legal counsel for specifics of contracts that might be used for export marketing.

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American Dairy Goat Association®Spindale, NC 28160 (828) 286-3801

ADGA currently has herd books for the following breeds; Alpine, LaMancha, Nigerian Dwarf, Nubian, Oberhasli, Saanen, Sable and Toggenburg.

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Home About Dairy Goats

About Dairy Goats

General Information

Domestic goats along with sheep are humankind's oldest domesticated species dating back some 10,000 years. For thousands of years, goats have been used for their milk, meat, hair, and skins over much of the world. In the last century they have also gained some popularity as pets.

Read more...

Care and Management of Dairy Goats

The dairy goat's popularity continues to increase rapidly as more people discover the dairy goat's appeal, utility and productiveness. The female dairy goat is a doe; the male, a buck; the young, kids; and a castrated male, a wether. Their life span is eight to twelve years. Some of the basics to know about the care and management of dairy goats are:

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The tasks of raising dairy goats is a year round effort. What to do and when to do it? Here's a year round guide written by Mary Blankevoort, DVM, to help you...

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Parts of a Dairy Goat 

For illustrations of the different parts of a dairy goat, look here...

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Milking Dairy Goats 

On a worldwide basis, more people drink the milk of goats than any other single animal. A dairy doe should be milked in the same manner as a dairy cow, using good dairy hygiene. Does may be milked by hand or machine. The milk requires the same careful attention to cleanliness and cooling as any other milk.

Read more...

Dairy Goat Breeding 

Dairy goats are usually seasonal breeders. Most breeding occurs in late summer through early winter. The goat has an 18-21 day estrus cycle or "season." The doe's "season" lasts from a few hours to two or three days. The gestation period is five months. Twins are common, but single or triplet births are not rare. A doe milks approximately ten months following kidding, then is held dry for two months before her next freshening.

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How to Tattoo a Dairy Goat 

Success in securing a lasting tattoo mark depends entirely upon the operator. A few simple rules must be observed:

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Dairy Goat Export Marketing 

The developing world has a demand for breeding goats from the United States. The most frequently requested breeds are Alpines,

Saanens, and Nubians. Our goat industry has marketing advantages over many other countries by offering records from organized programs such as DHIR Linear Appraisal and our competitive shows, which do not exist in most other countries.

Read more...

State Contacts For Starting a Grade A/B Goat Dairy 

Deciding to turn a hobby goat herd into a working dairy can seem like a daunting task. On the other hand, by contacting the right people the job can become easier. The first place you should go is your state's dairy division. They have the rules and regulations to live by as well as great advice on everything from equipment to marketing. Most importantly, they are there to help.

Read more...

Johne's Disease 

Johne's ("YO-knees") disease is a fatal gastrointestinal disease of goats and other ruminants (including cattle, sheep, elk, deer, and bison) that is caused by the bacterium *Mycobacterium avium* subspecies *paratuberculosis (MAP)*. Also known as paratuberculosis, this infection is contagious, which means it can spread in your herd.

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This We Believe:

- The boy and girl are more important than the projects.
- The member should be their own best product.
- No award is worth sacrificing the reputation of a member or leader.
- Competition is a natural human trait and should be recognized as such. It should be given no more emphasis than other fundamentals.
- Learning how to do the project is more important than the project itself.
- Many things are caught rather than taught.
- A blue ribbon member with a red ribbon project is more desirable than a red ribbon member with a blue ribbon project.
- To learn by doing is fundamental in any sound educational program.
- Generally speaking, there is more than one good way of doing most things.
- Every member needs to be noticed, to feel important, to win, and to be praised.
- Our job is to teach members *how* to think, not what to think.

DAIRY GOAT

Sonoma County 4-H

Name: _____ Date: _____

Guidelines for Project Proficiency Award
Beginning:

	Date Completed	Leader's Initials
1. Be able to name and recognize the six breeds of goats.	____	____
2. Know what "grade" and "experimental" means.	____	____
3. Know the parts of a dairy goat as shown in 4-H project book.	____	____
4. Explain what feeds a doe needs as a kid, as a bred doe, and when in lactation.	____	____
5. Show receipts, papers, or calendar, etc., covering a 90 day period for feed, medicine, vet bills, breeding fees, equipment, etc.	____	____
6. Follow a recommended program for vaccinations and worming.	____	____
7. Show how to take a temperature and know what is normal for your goat.	____	____
8. Know how to tell if your animal is ill and when you should call a vet.	____	____
9. Learn how to trim hoofs and do so regularly. Explain tools used.	____	____
10. Explain why a goat needs to be washed, clipped, and brushed.	____	____
11. Provide housing and fencing for you animals.	____	____
12. Exhibit at two shows.	____	____
13. Enter showmanship at least one time.	____	____
14. Memorize the general categories and mammary system of the ADGA scorecard.	____	____
15. Participate in the disbudding, tattooing and castrating of your kids.	____	____
16. Utilize your goat's milk.	____	____
17. Milk and keep milk production records for a goat one day a week for 12 weeks.	____	____
18. Share with another person a skill you have learned pertaining to your goat project.	____	____
19. What does ADGA stand for?	____	____
20. -Give a demonstration at your club. Attend one meeting of a local dairy goat association.	____	____
21. Describe the common signs of a doe in heat and how long a heat cycle lasts. How many days are there generally between cycles?	____	____

Project Leader's Signature of Completion: _____ Date: _____

Club Leader's Signature of Completion: _____ Date: _____

DAIRY GOAT

Sonoma County 4-H

Name: _____ Date: _____

Guidelines for Project Proficiency Award
Intermediate (3rd and 4th Years):

	Date Completed	Leader's Initials
1. Tell the history of your breed.	_____	_____
2. Describe the faults and strong points of one of your does.	_____	_____
3. Give reasons for your buck selection.	_____	_____
4. What are the four sections of the digestive system in a dairy goat?	_____	_____
5. Know how to give an injection and oral medicine.	_____	_____
6. Explain the symptoms and treatment of mastitis, bloat, sore mouth, Coccidiosis.	_____	_____
7. Be able to follow a treatment program set up by a vet. Keep records of such a treatment.	_____	_____
8. Show how to disbud, castrate, trim hoofs and tattoo your own animals.	_____	_____
9. Own your own milking stanchion.	_____	_____
10. Exhibit an average of three times a year.	_____	_____
11. Use proper showing techniques.	_____	_____
12. Volunteer to help a show committee.	_____	_____
13. Visit a grade A or B dairy currently marketing milk.	_____	_____
14. Memorize the ADGA scorecard.	_____	_____
15. Keep milk weights two times a week, morning and night for 13 weeks.	_____	_____
16. Keep records of heat cycles, breeding dates, kidding dates, and other kid and delivery information.	_____	_____
17. Keep individual doe records and use in breeding and culling programs.	_____	_____
18. Build a personal reference library.	_____	_____
19. Give a demonstration on dairy goats at the County Presentation Day.	_____	_____
20. Write an article or give a talk on Dairy Goats.	_____	_____
21. Explain *M, +*B and OCR.	_____	_____

Project Leader's Signature of Completion: _____ Date: _____

Club Leader's Signature of Completion: _____ Date: _____

DAIRY GOAT

Sonoma County 4-H

Name: _____ Date: _____

Guidelines for Project Proficiency Award
Advanced:

	Date Completed	Leader's Initials
1. Maintain health, production, management records for your herd and individual animals.	_____	_____
2. Carry through with:	_____	_____
• Marketing Showing Health Breeding		
3. Have your animals entered into the Linear Appraisal Program through the ADGA or attend a Linear Appraisal session.	_____	_____
4. Attend an untrasounding of a pregnant doe.	_____	_____
5. Attend a UC Davis Dairy Goat Day.	_____	_____
6. Be a junior/teen leader for the Dairy Goat Project.	_____	_____
7. Show or attend one open (adult) dairy goat show.	_____	_____
8. What are the disqualifying faults for each breed?	_____	_____
9. Give a demonstration or make a display for county Presentation Day.	_____	_____
10. Write an article or give a talk on Dairy Goats.	_____	_____
11. Learn about:		
• Dairy products		
• Nutrition		
• Preventative medicine		
• A.I.		
• Genetics or pedigree breeding		
• Milk Production		
• Other approved by leader _____		
12. Know how goat milk is marketed in California. Find out what you need to do to legally sell milk.	_____	_____
13. Handle your house milk according to grade A sanitary standards.	_____	_____
14. Explain the symptoms and treatment of:	_____	_____
• Jones CAE Abscesses		
• Eneterotoxemia Milk Fever		

Project Leader's Signature of Completion: _____ Date: _____

Club Leader's Signature of Completion: _____ Date: _____

I'm a 4-H Project Leader: Now What Do I Do?

How do I know who is in my project?

- Your club organizational leader will provide you with the names, addresses and phone numbers of the members enrolled in the project for which you are the leader.
- If you are working on the county level, contact the UCCE for the list of project members.
- The organizational leader may indicate to you if any of the youth have special needs. At your first project meeting, note any other youth that may have special needs.
- You may wish to consult with the parent or your 4-H Youth Development Agent as to how to work with a special needs child.

How often should I hold project meetings?

It is recommended you hold 4-6 meetings that each last 1½ to 2 hours in length. Some projects require more meetings or a longer meeting time to accomplish your goals. Some projects, such as leathercraft, may lend themselves to individual project work as members progress on their projects. In this case, you should hold several introductory meetings for all members and then set up a schedule of time for them to sign up for individual help.

When do I start?

Get started as soon as possible! Members' interest in a project is most keen when they are signing up for a project and when they get their project books.

How do I cover the cost of project meetings?

- There is a wide variety of means for covering the cost of project meetings. Some methods used include:
- Each member pays for their share of the expenses or provides a portion of the supplies.
- The club agrees to cover expenses using funds from their treasury. Approval in advance is needed for this.
- Members and leaders can solicit donations/supplies from area businesses.
- Sometimes funds from sources outside your club may be available to cover your project meeting costs.

How do I establish a project meeting schedule?

First, determine when you are available to work with project members. Then determine an initial project meeting date by consulting with your project members.

Thanks to 4-H Youth Development Programs, UW-Extension, Cooperative Extension for use of these materials.

Publicize the date using one of the following means:

- County and/or club newsletter
- Club meeting or leader association meetings
- Postcards or phone calls to project members

You may not be able to schedule an initial meeting that everyone can attend. Establish a time to meet with those unable to attend before you hold your second project meeting.

Where do I hold project meetings?

Typically project meetings are held at project leader homes, schools, or community buildings. For more information on facility adaptability and liability concerns contact your 4-H Youth Development Agent.

What safety precautions do we need to consider?

Consider the type of safety issues your particular project involves. Request and secure necessary safety items such as ear protection, eye protection and head protection.

How do I let others in my club or other clubs know I am a project leader?

Prior to enrollment ask for time on your club's meeting agenda to let families in your club know you're a project leader and to share some things the kids could do in the project if they enrolled in it. When the project materials are handed out, take the opportunity to inform or remind members that you are their project leader and set an initial meeting date with the group. If no one in your club is in your project, you may wish to offer your services to a neighboring club. Talk to your club organizational leader or county 4-H Youth Development agent about this opportunity.

How do I prepare for the first meeting?

You may want to establish a 4-H resource box where you keep your project materials and any additional resources you will be using. Take time to become familiar with your project literature and talk to others who were project leaders for this project to find out what activities the members enjoyed.

What should I do at the initial project meeting?

- At the initial project meeting, here are some ideas of what you might want to cover:
- Find out what the members want to learn and accomplish in the project. The project literature is an excellent source of ideas.
- Review the safety practices that members will need to follow.

Thanks to 4-H Youth Development Programs, UW-Extension, Cooperative Extension for use of these materials.

- Do an introductory activity related to the project so the members get to know one another
- Have a small project the members can complete and take home
- Talk about how the project meeting supplies will be paid for. Experienced leaders have found it easiest to charge a small fee to cover the cost of the expenses.
- Assess when members are available for additional meetings. You may wish to ask the parents or members to bring along their calendars of family activities.
- Encourage parents to participate in project meetings, especially the initial meeting.

What does a typical project meeting look like after the initial orientation?

Use the experiential learning model (found in the introductory pages of your Helper's Guide) to plan your project meeting. The project helper's guide will provide suggestions for designing a project meeting. Here are some suggestions for each section of the model:

Do

- Plan an activity to focus the project members on what they'll be doing today. Work on the project for that meeting.

Reflect

- Review the process completed
- Discuss what worked and didn't work.
- Talk about how any problems that arose were solved.
- Assist members in documenting their project work for inclusion in their record books/portfolios.

Apply

- Ask the project member the following questions:
- What else have you seen that is similar to this?
- How can you apply what you learned today to other situations?

What resources are available to help me?

- 4-H Project Literature – You will receive project literature through your 4-H club or the UW-Extension office. Typically there is a helper's guide and member literature for three to four levels.
- Other People in my Club & County – There are a number of people in your county who would be willing to share project ideas and tips with you.

Thanks to 4-H Youth Development Programs, UW-Extension, Cooperative Extension for use of these materials.

These include:

- Project leaders in other clubs
- County Staff
- Older youth who have been involved in the project

- Media Collection & Public Libraries – Additional resources can be obtained from the Cooperative Extension Media Collection. They have videos, skillathons, displays and resource packages available to support a variety of projects. There is a user fee per item you or your club will be responsible for. You can view their catalog at their website http://www.uwex.edu/ces/media/. Check with your local public library to find out what resources they may have or that you can obtain through inter-library loan.
- 4-H Website – Wisconsin 4-H is continually adding more information and activities to their website. Visit this site at www.uwex.edu/ces/4h/onlinepro/. You may wish to check out websites from other state 4-H programs also.
- Volunteer Leaders Conferences – Review each issue of your county's newsletter to learn about training sessions for project leaders offered by your county, district or at statewide events. Sessions focusing on new project literature are typically offered at the State 4-H Volunteer Leader Conference held every other year. Periodically statewide conferences focusing on specific project areas are offered in addition to sessions at the volunteer conferences. You can also exchange ideas with other leaders at statewide Field Day.
- Field Trips – Youth always enjoy the opportunity to see firsthand how things are done and how they work. Consider taking your project group on a field trip or tour of a local business or company to enhance their project experience. An example would be taking your dairy members to a cheese factory or your foods group to a local bakery.
- Local Experts – Bring in a local "expert" to share their ideas and experiences with your group. One example would be asking a Master Gardener to share information on choosing perennial or trimming shrubs at one of your project meetings.
- Magazines – Many leaders have found creative ideas to supplement those in the project literature in magazines they have or those at the public library.

Thanks to 4-H Youth Development Programs, UW-Extension, Cooperative Extension for use of these materials.

How can I incorporate activities not included in the project guide?

We encourage you to use the ideas in the project literature as they have been successfully used with youth. If you have some additional activities you would like to incorporate, consider the following criteria:

- Of interest to kids
- Developmentally appropriate
- Incorporate the experiential learning model
- Youth and adults are involved in determining what will be done
- Enhances the development of member life and project skills
- Research based source of content utilized

What is the relationship between project work and the county fair?

The County Fair is an opportunity for an independent evaluation of life and project skills a member learned through completing a project. County fair entries typically match the activities included in the project literature and may include other activities that are being emphasized in your county. One of your roles is to help maintain the focus of members and parents on the goal of 4-H, which is to develop blue ribbon kids. Talk with members about what they learned about each of their fair entries from the judging process. Help members celebrate their accomplishments regardless of the color of ribbon each project member received at the fair. This may be done through individual encouragement or at a meeting following the fair. While entering and displaying a project at the County Fair is the traditional method of public affirmation, there may be other means of exhibition such as a club tour, open house, community celebrations or others.

Who can I go to if I need someone to help me during the project meetings?

If you are leading beginning level project meetings, ask older members in the project to help you. This is a great leadership experience for them! Parents are another excellent source of help. Don't hesitate to ask them to stay for the meeting and be actively involved in their child's project work.

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