

4-H Dairy Goat Project



PENNSSTATE



College of Agricultural Sciences
Agricultural Research and Cooperative Extension

4-H Dairy Goat Project Book

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Objectives

Challenge and fun are in store for you as you begin this project.

The objectives of your 4-H dairy goat project are:

1. To have you learn the proper methods for care and management of purebred American dairy goats. Recorded $\frac{1}{2}$ through $\frac{7}{8}$ American or experimental dairy goats are acceptable with permission of your county extension service.
2. To give you experience and training in selecting dairy goats of the right type, feeding the proper ration, fitting, and exhibiting at 4-H roundups, open shows, and fairs.
3. To provide you the opportunity to keep complete and accurate feed and production records.
4. To enable you to participate in organized group activity within your club and to assume responsibility in the club program.
5. To demonstrate to the community the possibilities of dairy goats as a source of additional farm income.
6. To get satisfaction. Once you have enrolled in a 4-H project, carry it to completion. Get the thrill of completing what you start! A good 4-H member is the best exhibitor.

The 4-H Dairy Goat Project

Goats make good 4-H projects. They are interesting, like attention, are not expensive to buy or feed, are easily handled and transported, and are fun to show at fairs. The project is designed on the basis of a three-year-minimum plan. This gives you an opportunity to begin with a kid and develop her into a producing dairy goat.

After each goat has kidded, the records on milk production should be kept. Weight records of milk and butterfat tests should be made in order to determine the production. Only satisfactory producers should be retained as dairy goats.

Choosing Your Goat

When you buy your dairy goat, start by selecting a kid as young as possible and (if at all possible) choose a purebred or American (mandatory in many counties) and consider: (1) the production records of its ancestors, and (2) physical appearance (type) of the animal and its parents. Take a good look at the dam and ask for her production records.

If buying a mature dairy goat, be sure to ask for the animal's milk production records and that of its offspring. (Remember, however, when purchasing your project, any dairy goat purchased over nine months of age is not eligible to be shown as a 4-H animal until it is owned by you for at least 365 days.) A good producing doe averages 2,000 pounds of milk in a ten-month lactation period (the time when milk is produced). This is equal to a doe averaging approximately 7 pounds (or $3\frac{1}{2}$ quarts) of milk over 305 days.

The dairy goat should be sleek and alert and not fat and sluggish. Because goats are dairy animals, they must have dairy characteristics. She should be angular and not round. Her hip bones should be prominent and thighs thin. She should have considerable length of neck and her body should be long. The ribs should be long and far apart so you can slide one finger down between the ribs. This openness of rib denotes dairy temperament in the goat as well as the dairy cow. The skin of the dairy goat should be smooth, thin, and pliable. The hair should be reasonably fine to denote quality, but this will vary considerably with the breed.

The body should be long and the ribs well sprung, making adequate room for roughage plus two or more kids. There should be good width and depth of chest and body. This indicates adequate lung capacity and constitution. It is associated with strength and ruggedness.

The animal should be as straight as possible on top and especially strong in the chine and loin area. From the hip bones back to the pin bones (bones on each side of the tail) there will be some slope. The object should be to get this line as straight as possible. The shoulders should be refined and not coarse. They should blend into the body smoothly. The legs of the dairy goat should be straight with adequate width

of bone for strength, but not so wide that it appears coarse. The animal should walk easily and freely so it can forage on pasture. The hoofs should be well trimmed so the feet do not become deformed. The pastern should have some angle, but not so long that the dewclaws touch the ground.

The udder should be of good size when filled with milk and very much reduced in size when empty. A large udder doesn't always indicate high milk yield. It should be well held up to the body by the suspensory ligament so it will not become injured by hitting on stones and other objects in the pasture or around the barn. The low-slung udder is called pendulous. The teat should be uniform and medium in size.

Take time to ask questions about the health of your potential purchase. Check the goat closely for signs of disease. Ask the producer about their health program and for records of any vaccinations the goat may have received.

Resources

The Internet contains a variety of information about selecting, raising, caring for, and exhibiting dairy goats. Search and read as many articles as possible. A few Web sites of special interest include:

www.dairygoatjournal.com

sheepandgoat.com/goatlnks.html

www.adga.org

Notations

Once a 4-H member has completed three years and/or is carrying more than one dairy goat as a project, it is wise to transfer the individual animal pages (8 through 11) from this book to the *4-H Dairy Goat Herd Record Book* and carry the project on a herd basis from then on. The *Herd Record Book* is not recommended for a member under 12 years of age.

Fitting for the Show

Good grooming and management throughout the year generally prepares an animal for show. However, several special steps should be taken to prepare a dairy goat before every show. A dairy goat should be properly clipped all over approximately two weeks before the show; the hooves should be properly trimmed; and the animal should be clean, especially in the areas of the ears, hooves, and tail. General cleanliness adds to the appearance of your animal.

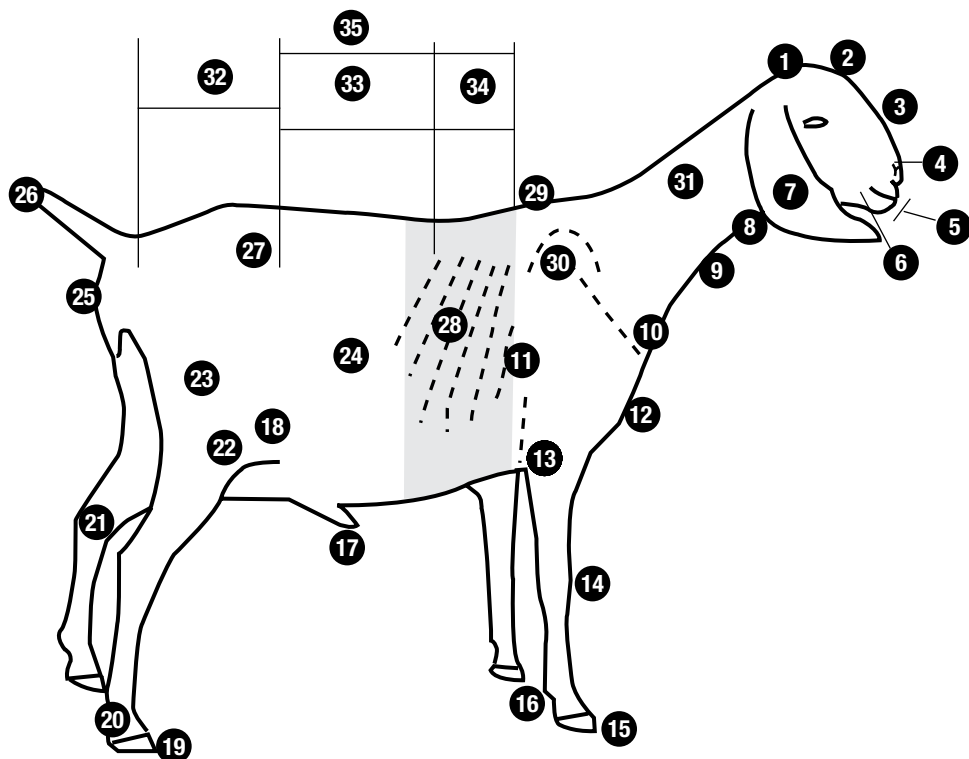
Showmanship

There is a proper procedure for exhibiting animals at a show. This procedure is outlined on the showmanship score card (page 7). Exhibitors should be dressed according to local standards. Animals should be trained so they become accustomed to being handled, led, and exhibited.

Production Record

The production record is kept on page 19. It should be kept each month. Start about two weeks after your goat freshens and continue weighing your goat's milk about the same day each month. Record the morning (A.M.) and evening (P.M.) milkings to the nearest tenth of a pound and then add them together for the "day" milk weight. The "days in month" is the number of days your goat milked during the month. Multiply the "days in month" by the milk weight for the day to get the "month's milk." Have the milk tested for milkfat and record in "% test" column. The "% test" times the "month's milk" will give you the "month's fat." The "lactation totals to date" for the first month will be the same as the "days in month," "month's milk," and "month's fat." For each month after the first, simply add the current month's days, milk, and fat to the previous lactation totals to date. The last "lactation totals to date" will be your goat's lactation production record and should be recorded on page 10's life history sheet.

Parts of a Goat



- | | | |
|----------------------|-------------------|-------------------|
| 1 Poll | 13 Point of elbow | 25 Pin bones |
| 2 Forehead | 14 Knee | 26 Tail |
| 3 Bridge of nose | 15 Toe | 27 Hip |
| 4 Nostril | 16 Dewclaw | 28 Ribs |
| 5 Muzzle | 17 Sheath | 29 Withers |
| 6 Jaw | 18 Flank | 30 Shoulder blade |
| 7 Ear | 19 Hoof | 31 Neck |
| 8 Throat | 20 Pastern | 32 Rump |
| 9 Dewlap | 21 Hock | 33 Loin |
| 10 Point of shoulder | 22 Thigh | 34 Chine |
| 11 Heart girth | 23 Stifle | 35 Back |
| 12 Brisket | 24 Barrel | |

Source: American Goat Society Judge's Training Manual

Dairy Goat Score Card

(Ideals of type and breed characteristics must be considered in using this card)

Based on Order of Observation			
1. GENERAL APPEARANCE			30
Attractive individuality revealing vigor; femininity with a harmonious blending and correlation of parts; impressive style and attractive carriage; graceful walk			
Breed characteristics	10		
Head —medium in length, clean cut; broad muzzle with large, open nostrils; lean, strong jaw; full, bright eyes; forehead broad between the eyes; ears medium size, alertly carried (except Nubians)			
Shoulder blades —set smoothly against the chest wall and withers, forming neat junction with the body			
Back —strong and appearing straight with vertebrae well defined			
Loin —broad, strong, and nearly level			
Rump —long, wide, and nearly level		8	
Hips —wide, level with back			
Thurls —wide apart			
Pin bones —wide apart, lower than hips, well defined			
Tail head —slightly above and neatly set between pin bones			
Tail —symmetrical with body			
Legs —wide apart, squarely set, clean cut, and strong with forelegs straight			
Hind legs—nearly perpendicular from hock to pastern; when viewed from behind, legs wide apart and nearly straight; bone flat and flinty; tendons well defined; pasterns of medium length, strong and springy; hocks cleanly moulded		12	
Feet —short and straight, with deep heel and level sole			
2. DAIRY CHARACTER			20
Animation, angularity, general openness, and freedom from excess tissue, giving due regard to period of lactation			
Neck —long and lean, blending smoothly into shoulders and brisket; clean cut throat			
Withers —well defined and wedge shaped with the dorsal process of the vertebrae rising slightly above the shoulder blades	20		
Ribs —wide apart; rib bone wide, flat, and long			
Flank —deep, arched, and refined			
Thighs —incurving to flat from the side; apart when viewed from the rear, providing sufficient room for the udder and its attachments.			
Skin —fine textured, loose, and pliable; hair fine			
3. BODY CAPACITY			20
Relatively large in proportion to the size of the animal, providing ample digestive capacity, strength, and vigor	12		
Barrel —deep, strongly supported; ribs wide apart and well sprung; depth and width tending to increase toward rear of barrel			
Heart girth —large, resulting from long, well-sprung foreribs; wide chest floor between the front and legs, and fullness at the point of elbow		8	
4. MAMMARY SYSTEM			30
A capacious, strongly attached, well-carried udder of good quality, indicating heavy production and a long period of usefulness			
Udder —Capacity and shape—long, wide, and capacious; extended well forward; strongly attached	10		
Rear attachment—high and wide; halves evenly balanced and symmetrical		5	
Fore attachment—carried well forward, tightly attached without pocket, blending smoothly unto body		6	
Texture—soft, pliable, and elastic; free of scar tissue; well collapsed after milking		5	
Teats —uniform, of convenient length and size, cylindrical in shape, free from obstructions, well apart, squarely and properly placed, easy to milk		4	
TOTAL			100

Dairy Goat Showmanship Score Card

Based on Usual Order of Consideration			
1. APPEARANCE OF ANIMAL			40
Condition and thriftiness —showing normal growth, neither too fat nor too thin		10	
Hair —clean and properly groomed		10	
Hoofs —trimmed and shaped to enable animal to walk and stand naturally		10	
Neatly disbudded —if the animal is not naturally hornless			
Clipping —entire body if weather has permitted, showing allowance to get a neat coat of hair by show time; neatly trimmed tail and ears		10	
Cleanliness —as shown by a clean body as free from stains as possible, with special attention to legs, feet, tail area, nose, and ears		10	
2. APPEARANCE OF EXHIBITOR		10	
Clothes and person neat and clean —white costume preferred		10	
3. SHOWING ANIMAL IN THE RING			50
Leading —enter, leading the animal at a normal walk around the ring in a clockwise direction, walking on the left side, holding the collar with the right hand; exhibitor should walk as normally and inconspicuously as possible			
Goat should lead readily and respond quickly			
Lead equipment should consist of a collar or small link chain, properly fitted		10	
As the judge studies the animal , the preferred method of leading is to walk alongside on the side away from the judge			
Lead slowly with animal's head held high enough for impressive style, attractive carriage, and graceful walk			
Pose and show an animal so it is between the exhibitor and the judge as much as possible; avoid exaggerated positions, such as crossing behind the goat			
Stand or kneel where both the judge and animal may be observed			
Pose animal with front feet squarely beneath and hind feet slightly spread; where possible, face animal upgrade with her front feet on a slight incline; neither crowd other exhibitors nor leave too much space when leading into a side-by-side position		15	
When judge changes placing , lead 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			
To step animal ahead , use slight pull on collar; if the animal steps badly out of place, return her to position by leading her forward and making a circle back through your position in the line			
When the judge is observing the animal , if she moves out of position, replace her as quickly and inconspicuously as possible			
Be natural. Overshowing, undue fussing, and maneuvering are objectionable			
Show animal to best advantage , recognizing the conformation faults of the animal you are leading and striving to help overcome them		15	
Poise, alertness, and courteous attitude are all desired in the show ring. Showmen should keep an eye on their animals and be aware of the position of the judge at all times, but should not stare at the judge. Persons or things outside the ring should not distract the attention of the showmen. Respond rapidly to requests from judges or officials, and be courteous and sportsmanlike at all times, respecting the rights of other exhibitors. The best showmen will show the animals at all times—not themselves—and will continue exhibiting well until the entire class has been placed, the judge has given his reasons, and he has dismissed the class.		10	
TOTAL			100

Suggested uniform:

Long-sleeved white shirt, regulation white pants, 4-H or FFA necktie, 4-H or FFA cap (if applicable), with matching shoes and belt in either black, white, or brown

Individual Animal

DOE PEDIGREE PAGE

NAME OF YOUR DOE AND NUMBER

Ch. Legs Won _____

AR _____ Yr. _____ Da. _____ M. ____ F. __

Body Parts to be Graded
(Ex., V.G., Good, Fair, Poor)

_____ Body Size _____ Top Line

_____ Body Length _____ Legs

_____ Body Width _____ Fore Udder

_____ Spring of Ribs _____ Rear Udder

SIRE

Ch. Legs Won _____

AR Herd Sire _____

Dau. Average _____ Milk _____ Fat

SIRE'S SIRE

Ch. Legs Won _____

AR Herd Sire _____

Dau. Average _____ Milk _____ Fat

SIRE'S DAM

Ch. Legs Won _____

AR _____ Yr. _____ Da. _____ M. ____ F. __

DAM

Ch. Legs Won _____

AR _____ Yr. _____ Da. _____ M. ____ F. __

DAM'S SIRE

Ch. Legs Won _____

AR Herd Sire _____

Dau. Average _____ Milk _____ Fat

DAM'S DAM

Ch. Legs Won _____

AR _____ Yr. _____ Da. _____ M. ____ F. __

The Growth Record

Measure the heart girth and height at withers of your goat and record it in your book every month. Make these measurements near the day in the month that your goat was born. The heart girth measurement is made with a tape measure around the chest just behind the forelegs. The withers measurement is made by standing the goat on a level floor, placing a long stick upright beside the forelegs and a short stick level over

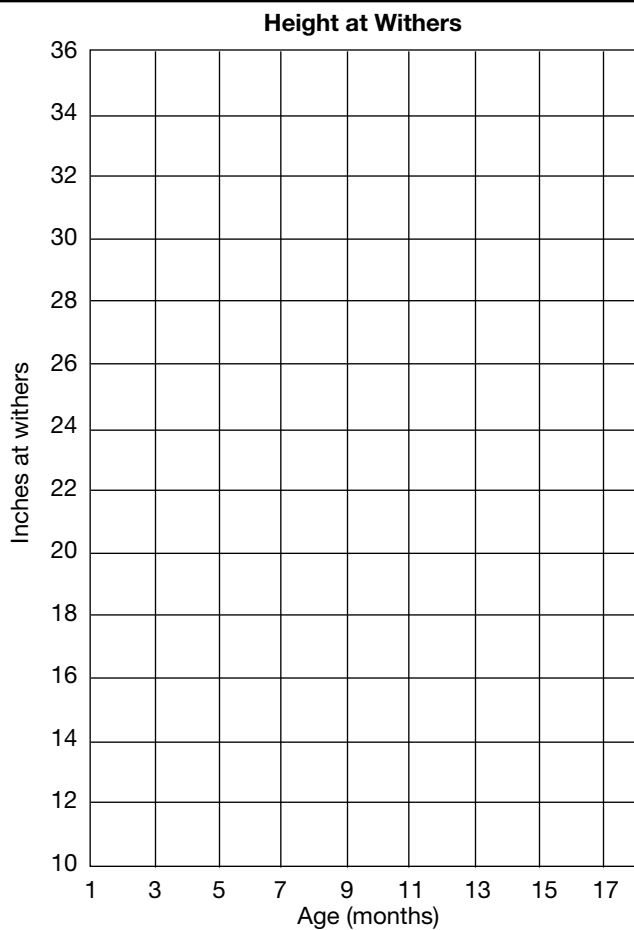
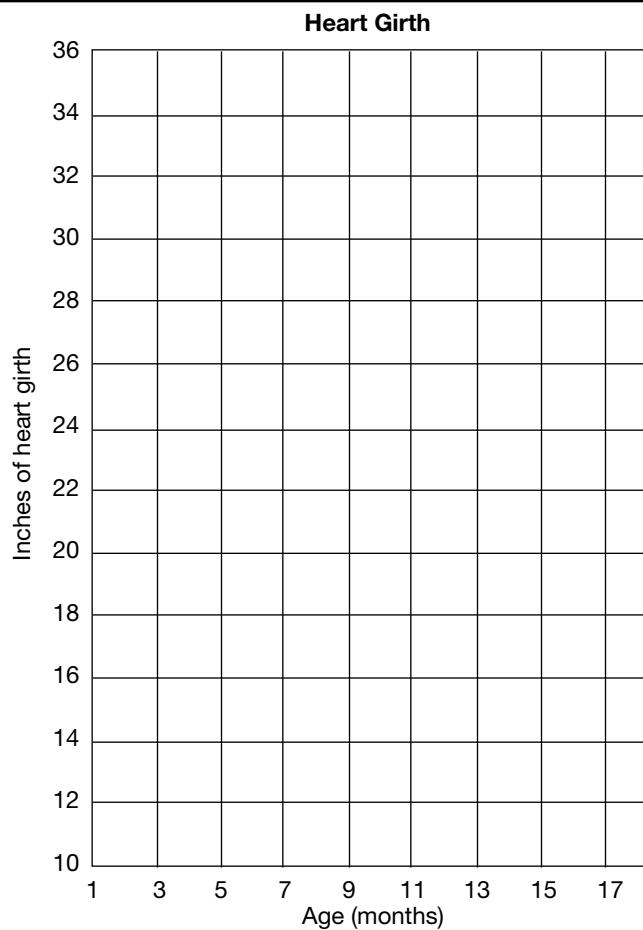
the withers, and crossing the upright stick. The height of the withers will then be the distance from the floor to where the short stick crosses the upright stick.

If you plot the growth on the charts at the top of page 16, you can see more easily how your goat is growing. The below table will give you the approximate weight of your goat by taping the heart girth.

TAPE GOAT WEIGHT TABLE

Heart Girth (inches)	Pounds	Heart Girth (inches)	Pounds
10.25	4.5	27.25	69
10.75	5	27.75	72
11.25	5.5	28.25	75
11.75	6	28.75	78
12.25	6.5	29.25	81
12.75	7	29.75	84
13.25	8	30.25	87
13.75	9	30.75	90
14.25	10	31.25	93
14.75	11	31.75	97
15.25	12	32.25	101
15.75	13	32.75	105
16.25	15	33.25	110
16.75	17	33.75	115
17.25	19	34.25	120
17.75	21	34.75	125
18.25	23	35.25	130
18.75	25	34.75	135
19.25	27	36.25	140
19.75	29	36.75	145
20.25	31	37.25	150
20.75	33	37.75	155
21.25	35	38.25	160
21.75	37	38.75	165
22.25	39	39.25	170
22.75	42	39.75	175
23.25	45	40.25	180
23.75	48	40.75	185
24.25	51	41.25	190
24.75	54	41.75	195
25.25	57	42.25	200
25.75	60		
26.25	63		
26.75	66		

GROWTH RECORD



Age (months)	Heart Girth (inches)	Wither Height (inches)
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____
6	_____	_____
7	_____	_____
8	_____	_____
9	_____	_____

Age (months)	Heart Girth (inches)	Wither Height (inches)
10	_____	_____
11	_____	_____
12	_____	_____
13	_____	_____
14	_____	_____
15	_____	_____
16	_____	_____
17	_____	_____
18	_____	_____

Individual Animal Name _____

SUMMARY OF TOTAL COSTS AND RECEIPTS

	Year					
Feed costs						
Medical costs						
Show fees						
Breeding fees						
Transportation						
Other expenses						
Original cost of goat						
Total cost for year						
Milk produced during year (lbs)						
Value milk per lb						
Value of year's milk						
Value of show awards						
Value of progeny sold						
Value other receipts						
Total receipts for year						
Net profit or loss						
Total profit or loss Balance to date						

Questions to Be Answered the First Year

1. What is a purebred goat? _____

2. Name two breeds of goats not including the breed you have. _____

3. What two things should you consider when buying your goat? _____

4. Where is a goat's "withers"? _____

5. Where is a goat's "heart girth"? _____

6. Your goat should be housed where she is protected against _____
and _____

7. When may milk feeding the kid be discontinued? _____
Under what condition? _____

8. How often should the grain be weighed or measured? _____

9. What tools would you need to trim the feet? _____

10. How can you tell whether your kid should be dehorned? _____

Questions to Be Answered the Second Year

1. How much grain should you feed yearlings that are on good pasture and/or hay? _____

2. What should your free-choice mineral mix contain? _____

3. What are the two most common health risks with goats? _____

4. When should young does be bred? _____

5. Where should your goat be at kidding time? _____

6. What part of your goat should be clipped before kidding? _____

7. How long a gestation period do goats have? _____
8. How many kids do mature goats usually have at one time? _____

9. How long a time is usually needed to fit your goat for show? _____

10. What dairy characteristics should a dairy goat have? _____

Questions to Be Answered the Third Year

1. How many days usually elapse between kidding and when milk is kept for human consumption? _____

2. How many months should your goat be in production? _____

3. How long a dry period should your goat have? _____

4. What is a good suggested winter ration for your goat? _____

5. Why should you feed any strong flavor feeds after milking rather than before milking? _____

6. Grain feeding is usually based on the rate of production.
What is the suggested ratio of pounds of grain to pounds of milk? _____

7. Why should you use a strip cup before milking? _____

8. What is the most practical way of preventing bacterial growth in milk after milking? _____

Basis of Award for Nonproducing Goat Projects

Items to be scored	Perfect score	Members score	
		year	year
Items related to care and management of animal:			
1. Pen and feed box or manger are adequate and clean	5		
2. Animal is relatively clean and well cared for, feet are kept trimmed properly	5		
3. Animal has been taught to lead	5		
4. Good quality hay is being fed	5		
5. Animal has access to fresh water at all times	5		
6. Animal appears healthy and shows no evidence of disease	5		
7. Animal's growth is adequate according to height and heart girth measurements in growth record	5		
Subtotal for animal's care:	35		
Items relating to the club member:			
1. Feeds and cares for own animal	5		
2. Knowledge of project	5		
3. Interest and attitude in project work	5		
4. Attendance at meetings	5		
5. Story of "experiences with my project," or a substitute report	5		
Subtotal for club member:	25		
Items relating to the record book:			
1. Questions for the year answered correctly	5		
2. Growth record complete	5		
3. Feed records complete	5		
4. Expense record complete	5		
5. General neatness of record book	5		
Subtotal for record book:	25		
Items relating to the roundup:			
1. Points awarded for animal's type	5		
2. Points awarded for club member's showmanship	5		
3. Points awarded for fitting of animal	5		
Subtotal for roundup:	15		
Total basis for award:	100		

First year scored by _____ Date _____

Second year scored by _____ Date _____

Basis of Award for Goat Projects in Production

Items to be scored	Perfect score	Members score	
		year	year
Items related to care and management of animal:			
1. Animal appears healthy	5		
2. Animal will lead	2		
3. Animal is relatively clean and well cared for—udder clipped and feet properly trimmed	5		
4. Stall and manger adequate and clean	2		
5. Animal has access to fresh water at all times	2		
6. Good quality forages are fed	2		
7. Grain is fed to balance animal's needs according to the roughages being fed (deduct for overfeeding as well as underfeeding)	2		
8. Good milking practices are followed	5		
9. Animal's production is high (7 points), satisfactory (5 points), or low (2 points)	7		
10. Animal has been bred to a good registered buck and will kid again within 13 months	3		
Subtotal for animal's care:	35		
Items related to the club member:			
1. Feed and cares for own animal	4		
2. Knows how to milk and milks own animal at least part of the time	4		
3. Knowledge of project	4		
4. Interest and attitude in project work	4		
5. Attendance at meetings	5		
6. Story of "Experiences with my project" or a substitute report	4		
Subtotal for club member:	25		
Items relating to record book:			
1. Questions for the year answered correctly	5		
2. Milk record complete	5		
3. Feeding record complete	5		
4. Expense record complete	5		
5. General neatness of record book	5		
Subtotal for record book:	25		
Items relating to the roundup:			
1. Points awarded for animal's type	5		
2. Points awarded for club member's showmanship	5		
3. Points awarded for club member's fitting	5		
Subtotal for roundup:	15		
Total basis for award:	100		

Scored by _____ Date _____

4-H Activities Report

This report will help you keep a better record of your club activities. Fill it in as you complete each assignment. Refer to this record when you are entering county, state, and national programs. Ask your local leader to explain these programs to you.

My 4-H Activities Report for the 20____ Club Year

Projects taken _____

TV member yes _____ no _____

Program title _____

Office held

Club _____

County _____

“Show-and-tells” given to:

Family _____

Friends _____

Local club _____

County _____

Regional _____

State _____

News articles _____

Radio _____

TV _____

Things done to improve your health _____

Community service or citizenship work done

By myself _____

With club _____

Number of meetings your club(s) held this year _____

Number you attended _____

Number of new members you encouraged to join 4-H

Number of boys and girls you helped with projects _____

In what way? _____

Check those attended and tell how you helped.

3- or 4-day camp _____

1-day camp _____

Club or county tours _____

Club picnic _____

Countywide picnic _____

4-H Sunday _____

County fair _____

Achievement programs _____

Roundup _____

Teen Leader Retreat _____

State 4-H Capital Days _____

Camp Leadership Training _____

Penn State 4-H Week _____

Pennsylvania Farm Show _____

National 4-H Week _____

Others _____

Name _____

Address _____

Name of Club _____

Leader's Name _____

Name of Project _____



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Penn State College of Agricultural Sciences research, extension, and resident education programs are funded in part by Pennsylvania counties, the Commonwealth of Pennsylvania, and the U.S. Department of Agriculture.

This publication is made possible through Pennsylvania 4-H educational materials fees.

This publication is available in alternative media on request.

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Produced by Ag Communications and Marketing

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Code # **A0510A** Rev3C3/09mpc4927

4-H Club Motto
“To make the best better”

4-H Club Pledge
I pledge
my head to clearer thinking,
my heart to greater loyalty,
my hands to larger service, and
my health to better living, for
my club,
my community,
my country, and
my world.

4-H Club Colors
Green and White