EWE FLOCK GUIDE AND RECORD

Extension Division • Virginia Polytechnic Institute and State University • Reprinted August 1976

Name _____ Age _____ Club Year _____

Address _____ County _____

Name of Club _____ Years in 4-H _____

Name of Leader _____ Record Book 89

OTHER SHEEP PUBLICATIONS*

Keeping Lambs Healthy, Leaflet 1029.

Intensive Sheep Production, Circular 982, 1965.

Internal Parasites of Sheep, Leaflet 232, 1966.

Foot Rot in Sheep, Leaflet 166, 1967.

Feeding Ewes, Leaflet 206, 1968.

Lamb Feeding in Virginia, Publication 328, 1970.

Sheep Management Schedule, Publication 365, 1970.

1972 Insecticide Recommendations—External Parasites of Sheep, CS 9.

*Copies can be obtained from your Extension Agent.

This publication was prepared by Dennis Rowan and G. A. Allen, Jr.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U. S. Department of Agriculture. W. E. Skelton, Dean, Extension Division, Cooperative Extension Service, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.

WHY TAKE THE EWE FLOCK PROJECT?

Sheep Are Popular

Many areas of Virginia are well-suited for raising sheep. In fact, Virginia is the largest sheep-producing state in the Eastern United States and ranks fifth among states east of the Mississippi River.

Sheep Are Prolific

Sheep have a high incidence of twinning and under some management systems, they produce more than one lamb crop per year. Therefore, sheep have the capability of producing an average of two or more lambs per year.

Sheep Are Profitable

Initial investment to begin a sheep enterprise is relatively low. Returns on investment come fast (8-9 months after breeding). Returns per hour of labor and per dollar invested are higher than those of any of the other farm animal species. Unlike other farm animals, sheep provide both meat and fiber for the consuming public.

Sheep Are Pleasurable

Among farm animals, sheep are easiest to handle. While they require some intensive care at certain times of the year, they are easy to drive, corral, catch, hold, examine, and treat (drench, hoof-trim, castrate, dock, etc.).

PURPOSE

The ewe flock project is designed to meet the needs of the 4-H member in developing characteristics of responsibility, leadership, and citizenship.

The project is also designed to acquaint members with the selection, breeding, feeding, and general management of a sheep flock to produce lambs and wool.

REQUIREMENTS

Any 4-H member is eligible to take this project. Members must own or care for at least 1 ewe. However, since sheep have strong flocking instincts (banding together, grazing together, etc.), 5 or more sheep together is more satisfactory.

Animals used for this project may be purebred or grade. The primary emphasis of this project is commercial lamb production.

MORE ABOUT SHEEP

Meat from a lamb less than 12 months of age is called lamb. You are probably familiar with the terms leg-of-lamb and lamb chops. Meat from older sheep is called mutton. Mutton is not as tender or flavorful as lamb and it is not as expensive. Therefore, meat production in the sheep industry is directed toward production of slaughter lambs.

Sheep that are muscular and produce more meat on their carcasses are referred to as mutton breeds. Examples are the Hampshire, Suffolk, and Dorset. The mutton breeds are more popular in the Eastern United States.

Other breeds of sheep, such as the Rambouillet and Merino, are called fine wool breeds and they are known for their ability to produce large quantities of wool. In fact, they may produce 3 times as much wool as the mutton breeds. These sheep are not very suitable for market lamb production unless ewes are bred to one of the mutton breed rams.

Crossbred ewes that result from the mating of a mutton-type ram with ewes of the fine wool breeds make good producers of meat and wool. They are quite hardy and have been used extensively in Virginia. They are commonly referred to as "Western ewes" because they originate from the western section of the United States.

While lamb production is the primary product from mutton-type sheep, the wool clipped from your flock will contribute 10 to 15 percent of your total income. An average fleece from sheep raised in Virginia weighs about 6 pounds.

Wool is extremely adaptable for clothing because it holds body heat well, is slow to burn, and does not wrinkle easily.

STARTING YOUR EWE FLOCK

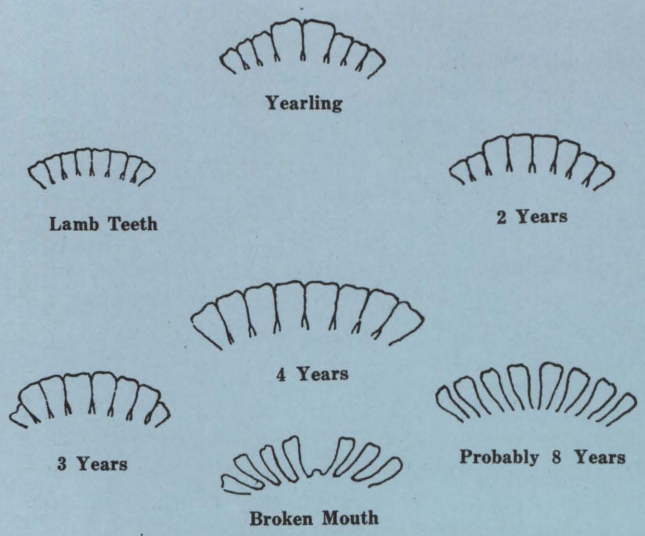
Selection of Breeding Stock

Begin with good foundation stock. Ewes should have a high reproductive rate, good mothering ability, and be capable of producing fast-growing lambs. Ewes should also serve a long life in the flock.

Soundness. This is a very important characteristic. If a ewe is not sound, she cannot produce at a maximum level. The feet should be free of foot rot and legs should be squarely placed under the corners of the body. Avoid post-legged ewes (those with rear legs that are too straight).

Udders. These should be soft, pliable, and free of lumps.

Mouth. The mouth must also be sound. Avoid ewes with overshot or undershot mouths.



Check age of sheep by examining mouth.

Size. Ewes should be large-framed, long, and relatively thick-bodied. They should have a strong, well-muscled topline and thick, heavily-muscled legs. Avoid ewes that are short, dumpy, fat, and coarse-looking.

Wool. Select ewes that have a dense uniform fleece, free of black fiber. The wool should show a lot of crimp (wavy or wrinkled-type segments of the fiber).

The ram contributes 50% of the total genetic make-up of each lamb he sires. Regardless of the type feeding and management programs you use, no lamb will be any better than its genetic potential. Therefore, a good ram is worth much in terms of supplying the needed potential of your lamb crop.

Select a ram in much the same manner as ewes in terms of muscularity, size, and soundness. If possible, obtain a ram that has performance records because they provide a clear indication of his true value. Try to obtain a ram whose growth rate is greater than his pen mates or flock mates.

Feeding

Grain feeding is not normally necessary during the first 3½ months of pregnancy. This is the time to use crop residues and pasture-hay. Silage can be fed if this period is during winter months.

Most of the growth of unborn lambs occurs during the last ⅓ of pregnancy or gestation. Six weeks before lambing, start feeding ¼ lb. grain per day plus 4 lbs. hay in winter months.

Feed minerals free choice. A number of good commercial mineral mixes are available and usually sell for $4.00 to $7.00 per 100 lbs. A good home mineral mixture can be made by using 3 parts of either defluorinated rock phosphate, dicalcium phosphate, or steamed bone meal, and 1 part ground limestone, and 1 part trace mineralized salt.

FLOCK MANAGEMENT

For a complete outline of recommended management practices, you should obtain a copy of Extension Publication 365, Sheep Management Schedule, from your Extension Office.

AMOUNTS OF FEED TO MEET DAILY REQUIREMENTS

		Legume Hay Or Silage*	Grass or Small Grain Hay Or Corn Silage*
		Pounds of Dry Feed per Day	
Dry ewe or until 4-6 weeks before lambing	Forage	2 to 4	2 to 4
	Grain		
	Oil Meal		0.2 to 0.4
Last 6 weeks before lambing	Forage	3 to 5	3 to 5
	Grain	0.5	0.7
	Oil Meal		0.3
First 8-10 weeks after lambing	Forage	4 to 6	4 to 6
	Grain	1 to 1.5	1.3 to 1.7
	Oil Meal		0.3
Last 12-14 weeks after lambing	Same as last 6 weeks before lambing		

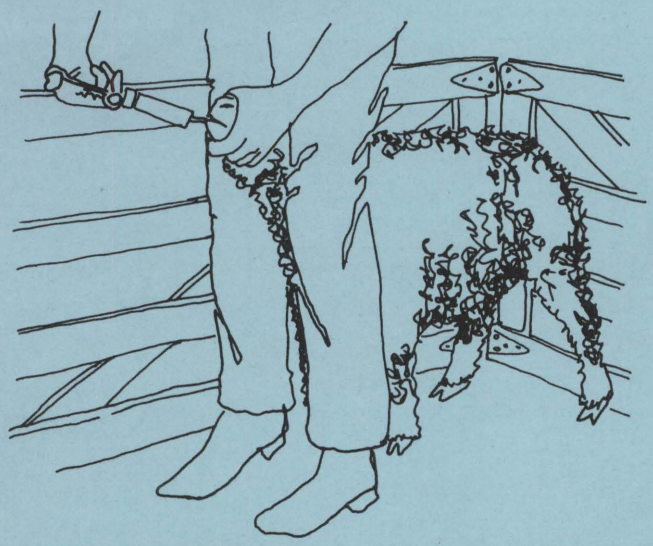
*2.5 to 3 lbs. of silage plus minerals, protein, and vitamins are about equal to 1 lb. of hay. Have hay and silage tested through the Virginia Tech Forage Testing Program to determine its nutrient value.

Breeding

Ewes are seasonal breeders. They are referred to as seasonal polyestrous animals. This means they exhibit estrous or heat seasonally, but once they begin coming into heat, they will do so many (poly) times in a regular manner. As the number of daylight hours begins to shorten (late summer to fall), ewes begin to exhibit estrous. They continue to do so until late winter when the number of daylight hours begins to increase. Some breeds of sheep have a much longer breeding season than others. The average ewe comes in heat every 17 days during the breeding season, stays in heat 18 to 40 hours, and will lamb 145-152 days after breeding.

Prior to breeding, treat ewes for internal parasites. If some ewes appear fat, place them in a dry lot 6 weeks before breeding and feed only a limited amount of hay (about 2 lbs. daily). Two to 3 weeks before breeding time, turn all ewes on good pasture. Thinly fleshed ewes should be fed ¼ to ½ lb. of oats, barley, or wheat for 2 weeks before and 2 weeks after exposure to the ram. One mature ram may be used to breed about 35 ewes. A large ram lamb may be used on 10 to 12 ewes.

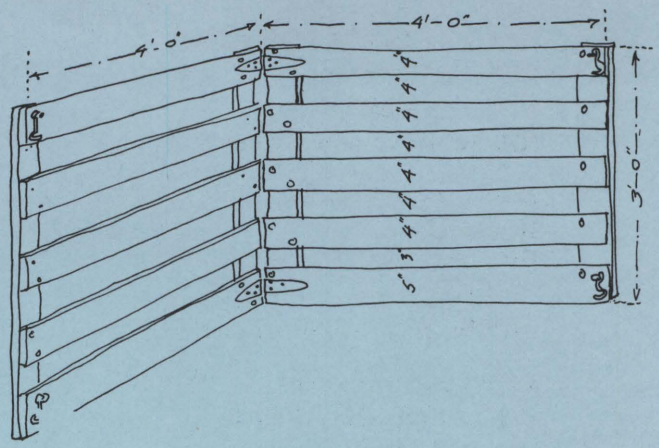
If the weather is hot, provide shade for the flock. If it is practical, keep the flock in a cool, darkened barn during the hot part of the day and allow them to graze at night.



Drenching for internal parasites.

Lambing Time

As lambing time draws near, check and separate ewes that are developing udders. Increase feed to ewes showing lambing signs to ¾ lb. of grain per day plus all the good legume hay they will eat.

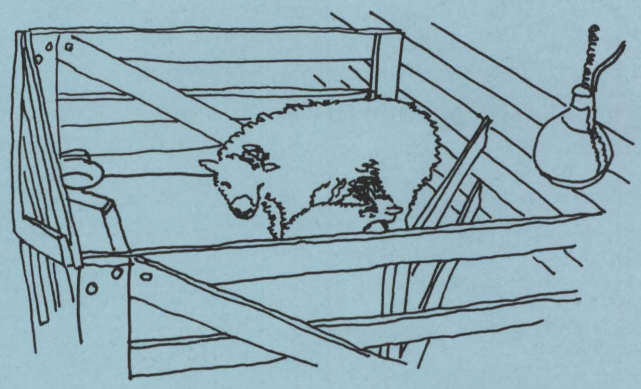


Hinged panels for temporary lambing pen.

Provide shelter for ewes, prepare lambing pens, and check heat lamps and other lambing equipment.

Check ewes at least 4 times daily as lambing time draws near. When lambs are born, move ewe and her lamb(s) to a 5′ x 5′ pen. Treat lamb's cord with iodine. Use a heat lamp for lambs that appear weak or chilled. Check the ewe's udder to see that she has milk and observe the lambs to see if they nurse during the first hours.

Give ewe fresh water and hay the day she lambs, but wait until the second day to feed her grain.



Lambing pen.

The ewe and lamb(s) may be moved to a larger pen with other ewes and lambs when the lamb(s) become strong and active (1 to 4 days).

Keep ewes and lambs in small groups until lambs are a week to 10 days old. Lambs may be docked, castrated, and vaccinated for overeating disease at this time. Increase ewe's feed to 1½ lbs. grain, plus all the legume hay and/or silage she will eat. Lambs may be started on a creep ration by 2 weeks of age.

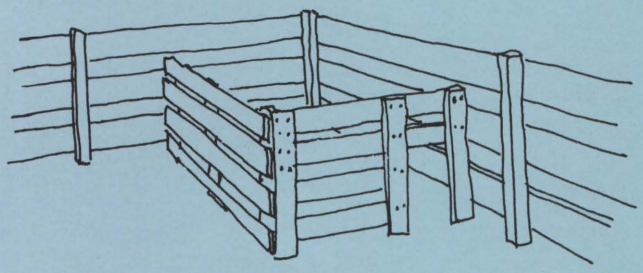
RATIONS FOR CREEP OR WEANED LAMBS

1. 80% Cracked Shelled Corn
   10% Oats
   10% Oil Meal
   Alfalfa Hay—Free Choice

2. 75% Cracked Corn
   10% Oats
   10% Oil Meal
   5% Molasses
   Alfalfa Hay—Free Choice

3. 55% Cracked Corn
   40% Alfalfa Hay Pellets
   5% Oil Meal

4. 54% Ground Shelled Corn
   25% Ground Legume Hay
   15% Oil Meal
   5% Molasses
   1% Ground Limestone



Creep feeder

One Month after Lambing

1. Treat ewes for internal parasites.
2. Observe ewes and lambs carefully. Pick out those that look unthrifty. Put them in a separate group and give them extra feed and special attention.

Two Months after Lambing

1. In large operations or if sheep are on pasture, treat ewes and lambs for internal parasites. If on pasture, rotate to a fresh pasture.

Two to Three Months after Lambing

1. Consider weaning lambs under the following conditions:
   A. During winter, keep lambs on full feed, but put ewes on a maintenance ration (2 lbs. of hay or 5 lbs. of silage per day). This can reduce total winter feed requirements.
   B. During late spring or summer and especially during hot, wet seasons, or if you are short of pasture, keep lambs in cool barn or shed on full feed and put ewes on poor pasture or feed maintenance ration as in A.
   C. Intensive operations where several ewes are kept per acre of pasture.
   D. If it is time to breed ewes again.

Three to Four Months after Lambing

1. Top out and sell lambs that are ready for market. Good operations should have several lambs weighing 100 pounds by now.
2. Treat, for internal parasites, lambs that will not be ready for market within the next 3 weeks.
3. By 4 months of age, all lambs that are not ready for market should be weaned.

EVALUATING PERFORMANCE

To properly evaluate the performance of your ewes, you must weigh the lambs and then adjust all weights to the equivalent of 120 days. The table on page 8 shows adjustment factors to be used.

By dividing the weight of a lamb by the number of days old at weighing, you obtain a factor which is then multiplied by 120 to get the adjusted 120-day weight. This is multiplied by one of the factors in the table to adjust for age of ewe, number of lambs born, and sex of lamb.

Note the example shown below the table.

DEFINITIONS

ADG—average daily gain

ARTIFICIAL INSEMINATION—the breeding of a ewe by a technician with semen previously collected from a ram

BREED—a group of animals that have similar characteristics which are passed on from generation to generation

TO BREED—to mate

BRED—has mated

CONCENTRATES—feeds low in fiber and high in food value; for example, grain and protein supplements

CREEP FEEDER—an enclosure or small pen designed so that lambs can get to a feed supply without allowing ewes to eat

CROSSBREEDING—mating of 2 different breeds

DIGESTION—the process of breaking down feeds into nutrients so that they can be used by the animal's body for growth and fattening

DIGESTIBLE PROTEIN—that portion of protein an animal eats that can be used by the animal

DOCK—to remove the tail of lambs

EWE—a female sheep of any age

FIBER—that part of a feed not easily digested by the animal; for example, hay stems and corn cobs

FORAGE—a term for high quality roughages; plants harvested before they reach the stage of maturity where seeds have been formed

GENETICS—the study of how characteristics are inherited from the parents

GESTATION—the period of time between successful mating of a ewe and birth of the lamb

GRADE—an animal that has one or both parents that are not recorded in the registry association

HEAT PERIOD OR ESTRUS—that time when a ewe will accept the ram for mating

HEREDITY—the transmission of characteristics from parent to offspring

INTERVAL OF HEAT OR ESTROUS CYCLE—the regular period of time between periods of estrus

LAMB—a young sheep less than 1 year of age

LAMBING PERCENT—the number of live lambs born expressed as a percent of the number of ewes exposed to the ram

LAMB CROP—the number of lambs weaned expressed as a percent of the number of ewes exposed to a ram

MINERALS—feeds which build bones and teeth and are necessary for important body processes

NUTRIENT—any food element that aids in the support of life

PROGENY—offspring (lambs)

PROTEIN SUPPLEMENTS—a protein concentrate containing 32 to 50% protein; for example, linseed meal and soybean meal

PUBERTY—time when young begin to show secondary sex characteristics (to exhibit estrus, etc.)

PUREBRED—an animal both of whose parents are of the same breed and are recorded in the registry association

RAM OR BUCK—an uncastrated male sheep of any age

RATION—the feed given to an animal over a 24-hour period

ROUGHAGE—a term for low quality forages that were harvested late and consequently furnish less energy than if they had been harvested earlier

RUMEN—the largest compartment of the 4-part stomach of cattle or sheep

RUMINANT—an animal that chews its cud and has a stomach divided into 4 parts; for example, cattle, sheep, deer

TDN (TOTAL DIGESTIBLE NUTRIENTS)—the part of feed that is digestible or usable by the animal

VITAMINS—food substances which are necessary but required only in small amounts by animals

WETHER—a castrated male sheep

ADJUSTMENT FACTORS

Multiply 120-Day Weight by the Appropriate Factor

	Age of Dam		
	3 to 6 Yrs. Old	2 Yrs. Old or Over 6 Yrs. Old	1 Yr. Old
EWE LAMB			
Single	1.00	1.09	1.22
Twin—Raised as Twin	1.11	1.20	1.33
Twin—Raised as Single	1.05	1.14	1.28
Triplet—Raised as Triplet	1.22	1.33	1.46
Triplet—Raised as Twin	1.17	1.28	1.42
Triplet—Raised as Single	1.11	1.21	1.36
WETHER			
Single	0.97	1.06	1.19
Twin—Raised as Twin	1.08	1.17	1.30
Twin—Raised as Single	1.02	1.11	1.25
Triplet—Raised as Triplet	1.19	1.30	1.43
Triplet—Raised as Twin	1.14	1.25	1.39
Triplet—Raised as Single	1.08	1.18	1.33
RAM LAMB			
Single	0.89	0.98	1.11
Twin—Raised as Twin	1.00	1.09	1.22
Twin—Raised as Single	0.94	1.03	1.17
Triplet—Raised as Triplet	1.11	1.22	1.35
Triplet—Raised as Twin	1.06	1.17	1.31
Triplet—Raised as Single	1.00	1.10	1.25

EXAMPLE: To find the adjusted 120-day weight of a twin-born and reared ram lamb from a 2-year-old ewe that weighed 90 pounds at 110 days of age, make the following calculations:

$$\frac{\text{90 lbs.}}{\text{110 days of age}} = 0.82 \text{ lb. x } 120 = 98 \text{ lbs. x } 1.09 \text{ (adjustment factor)} = 107 \text{ lbs.}$$

The adjusted 120-day weight of the lamb would be 107 lbs.

NOTE: If a lamb is born a single but raised as a twin, adjust it as a twin-born, twin-raised lamb.

Inventory of Animals

	Purchased or on Hand at Beginning of Year		On Hand at End of Year	
	No.	Value	No.	Value
Purebred Ewes (1 yr. or older)				
Grade Ewes (1 yr. or older)				
Replacement Ewe Lambs				
Purebred Ewe Lambs (less than 1 yr.)				
Grade Ewe Lambs (less than 1 yr.)				
Others				
TOTAL				

Pictures of Animals
(Side view)

Picture at Beginning of Project

Date picture taken _____

Picture at End of Project

Date picture taken _____

Monthly Summary of Flock Management and 4-H Activities

For each month explain the management practices you used (treatment for internal parasites, care at lambing, castrating, docking, etc.) and club activities you took part in that related to this project.

October: _____

_____

_____

November: _____

_____

_____

December: _____

_____

_____

January: _____

_____

_____

February: _____

_____

_____

March: _____

_____

_____

April: _____

_____

_____

May: _____

_____

_____

June: _____

_____

_____

July: _____

_____

_____

August: _____

_____

_____

September: _____

_____

_____

PRODUCTION RECORD

Date ram(s) turned in with ewes _____. Date ewes due to begin lambing _____.

EWE		Sire	Date Lambed	Lamb No.	Sex	Birth Weight	120 Day Weight				Total Adj. Wt. of Lambs	Fleece Wt.	( )Check one			Remarks
No.	Age						Date Weighed	Age in Days	Actual Weight	Adjusted 120 Day Wt.			died	kept	sold	

Remarks - Should include type score or comments on lambs, if kept for breeding; if sold, the price received.

FEED COSTS

List below the rations you used for your flock. Use these figures to calculate monthly feed costs.

Type Feed Used	Lbs. per day	X	Cost per lb.	=	Cost per day

#1 Winter Ration for First 2/3 of Gestation

_____	_____	X	_____	=	_____
_____	_____	X	_____	=	_____
_____	_____	X	_____	=	_____
	Total Feed Cost per Head per Day			=	_____

#2 Winter Ration for Last 1/3 of Gestation

_____	_____	X	_____	=	_____
_____	_____	X	_____	=	_____
_____	_____	X	_____	=	_____
	Total Feed Cost per Head per Day			=	_____

#3 Ration for Ewes Nursing Lambs

_____	_____	X	_____	=	_____
_____	_____	X	_____	=	_____
_____	_____	X	_____	=	_____
	Total Feed Cost per Head per Day			=	_____

#4 Ration for Creep-fed Lambs

_____	_____	X	_____	=	_____
_____	_____	X	_____	=	_____
_____	_____	X	_____	=	_____
	Total Feed Cost per Head per Day			=	_____

#5 Figure pasture cost at $ .015 (1½¢) per ewe per day during pasture season.

Monthly Expenses

Month	Feed Cost	Miscellaneous Expenses*	
		Item	Cost
TOTALS	$		$

*Include such items as veterinary expenses, hauling, and market fees. Do not include cost of equipment in this table. Include a charge of $1.50 per ewe for breeding fee for natural service whether you actually paid for the service or not.

Income Record

Animals Sold

Date	Type	No. Head	Total Lbs.	Amount per Lb. or per Head	Total Value

Value of Wool

1. Number fleeces sold _____.
2. Total pounds sold _____.
3. Price per pound _____.
4. Total income from sale of wool_____.
5. Incentive payment for last year's wool and unshorn lambs _____.
6. Total value of wool (add lines 4 and 5) _____.

Exhibit Record and Prizes

Name of Exhibit	Where Shown	Placing	Premium
			$
		Total	$

Inventory of Purchase and Owned Equipment and Supplies

Kind of Equipment or Supplies	Value at Start of Project	Equipment Purchased during Project	Value at End of Project
	$	$	$
Totals	$	$	$

All equipment and supplies would not be completely used during the project; therefore, we must use inventories to determine the amount used by the project during the year.

1. Value of equipment and supplies at end of project $_____
2. Value of equipment and supplies at start of project $_____
3. Cost of equipment and supplies purchased during project $_____
4. Total of line 2 and 3 $_____
5. Cost of equipment and supplies to project (line 1 minus line 4) $_____

Financial Summary

1.	Value of flock at end of year	$_____	
2.	Value of flock at beginning of year	$_____	
3.	Net increase or decrease in value of flock (line 1 minus line 2)	$_____	
4.	Receipts from lambs and ewes sold	$_____	
5.	Value of wool	$_____	
6.	Receipts from exhibits and awards	$_____	
7.	TOTAL INCOME		$_____
8.	Feed costs	$_____	
9.	Cost of equipment and supplies	$_____	
10.	Miscellaneous expenses	$_____	
11.	TOTAL EXPENSES		$_____
12.	PROFIT OR LOSS (subtract line 11 from line 7)		$_____

Summary of Flock Management

1. What breed of sheep do you have? _____
2. How many ewes were exposed to the ram? _____
3. How many ewes lambed? _____
4. How many total live lambs were born? _____
5. What was the lambing percent of your flock? (line 4 divided by line 2).

   _____

6. How many lambs were alive at weaning? _____
7. What was the percent lamb crop? (line 5 divided by line 2).

   _____

8. At what age were lambs castrated? _____, docked?_____ .

9. What method was used for castrating?_____,

   docking? _____.

10. How many times were ewes treated for internal parasites during the year?

    _____. What compound(s) were used?_____.

11. Were ewes treated for ticks? _____. How? _____

    _____

12. What improvements in your flock breeding, feeding, and management do you hope to accomplish next year?

4-H ACTIVITIES RECORD

I. **Club Responsibilities**

Number of meetings your club held this year. _____

Number you attended. _____

Offices held in 4-H club work this year.

_____

_____

Committees you served on. _____

_____

_____

Did you serve as a 4-H member leader?

yes _____ no _____

II. **Project Activities**

Projects you completed this year._____

_____

_____

Give location for each activity below (Local, L; County, C; District, D; State, S; Regional, R; National, N).

Talks. Give title. _____

_____

_____

_____

Demonstrations. Give title. _____

_____

_____

_____

_____

Exhibits. Give name of project._____

_____

_____

Judging Contests. Give type._____

_____

Showmanship Contests. Give type._____

_____

_____

Public Speaking Contests. Give title.____

_____

_____

III. **Other Activities**

Place a check (√) beside the following activities and events in which you participated.

( ) Project tour
( ) Project workshop
( ) Judging school
( ) Fitting and Showing school
( ) Officer training
( ) Leadership training
( ) Community service project
( ) 4-H Church Sunday
( ) National 4-H Club Week
( ) County Camp
( ) Conservation Camp
( ) TV Camp
( ) Electric Congress
( ) State 4-H Congress
( ) National 4-H Congress
( ) 4-H Citizenship Short Course
( ) 4-H Citizenship Conference
( ) Achievement Day
( ) Health check-up by Doctor
( ) Dental check-up by Dentist
( ) News articles written, No. _____
( ) Radio programs, No. _____
( ) TV programs, No. _____
( ) Others

_____

_____

IV. **4-H Awards and Honors**

List those received this year.

_____

_____

Date Ewe Flock project completed _____