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A Small Sheep Flock—Can You Manage It for Profit?

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# A Small Sheep Flock—

## *Could You Manage It for Profit?*



by Gordon Wuethrich and  
Gerald Schwab<sup>1</sup>

SHEEP ARE a natural choice to utilize the renewable resources of pasture and hay that abound in Michigan.

The ewe flock may fit those farms that have some pasture, access to a supply of hay, minimal building facilities, good fencing and willing labor. This is an excellent enterprise for families who have access to these resources plus a willingness to learn and adopt managerial practices to improve performance of the ewe flock.

Ewe flocks may consist of commercial or purebred breeding stock. Commercial flocks are kept for the production and sale of meat and wool. Pure-

bred flocks, in addition to producing lamb and wool, also produce purebred rams and ewes for sale to other breeders and rams for commercial flocks. This part of the industry requires high-quality breeding stock; additional record keeping; experience in selection, fitting and showing sheep; time to exhibit the stock at various places; and additional financing to fund these activities. Managed correctly, the purebred industry can be a very satisfactory and financially rewarding enterprise. However, the majority of the small flocks will be commercial in nature, producing lamb and wool for sale.

<sup>1</sup> The authors are former graduate student and associate professor, respectively, in the Agricultural Economics Department, Michigan State University. The authors are indebted to Dr. Harold Henneman, Dr. Ben Bartlett, and Mr. Joseph William Ames who reviewed earlier versions of this paper.



# What Are Sheep Like?

Many biological and behavioral characteristics distinguish sheep from other animal species. Depending on the breed, they tend to be very social, grazing or staying together. Sheep are more easily led than driven and do follow the leaders.

Sheep are relatively clean. This fact suggests the importance of clean water and fresh feed. Sheep may refuse to eat or drink if the feed, water or its container are dirty.

The manure production volume of sheep is much less per animal and per pound of body weight than for either hogs, horses or cattle. The estimated manure production per animal is approximately 1,200 pounds per year. Sheep manure is quite solid, almost granulated, and one of the most valuable in terms of nutrient content that can be returned to the soil.

Sheep are ruminants; that is, they have four stomach compartments which enable them to digest forages such as hay. Ewes require a minimum amount of grain at critical periods before breeding, 6 weeks before lambing and during lactation. At other times, they can maintain themselves on a forage diet.

For 2 weeks prior to breeding, it may be useful to "flush"† or increase the energy level of the ewes by providing 3/4 pound of corn or an equivalent amount of grain per ewe per day or by using a lush, improved pasture and no grain. This increase in energy level should increase the ovulation rate and thereby increase the probability of multiple births. Moreover, 6 weeks prior to lambing, 1/2 pound of corn per ewe per day will decrease the risk of pregnancy disease by increasing the energy reserves of the ewe and also provide for a more vigorous lamb at birth.

†Flushing—the increasing of the energy level in the ewe's ration prior to breeding in hopes of increasing the probability of multiple births. Ewes in a thin condition may respond more favorably than ewes with more condition.

During the first 10 weeks of lactation, feed an average of .8 pounds of corn or equivalent per day to those ewes raising single lambs and an average of 1.0 pound of corn or equivalent per day to those ewes raising twin lambs. This difference in feeding schedule necessitates the separation of the ewes raising single lambs from those raising twins.

## BREEDING

Sheep can be bred at approximately 7 months of age and lamb at 1 year of age. However, ewe lambs need more care and feed, as they are still growing, and require more individual attention at lambing time. Most sheep in the United States are seasonal breeders and will not enter their estrus, or heat period, until the hours of daylight are declining; this varies among breeds.

Most breeding activity will not begin until August and will usually occur at night during the early portion of the breeding season. The estrus cycle is 14 to 19 days in length with an average of 17 days. The estrus should last for 24 to 28 hours. The gestation period is 145 to 152 days with an average length of 147 days. The beginning of the lambing period can be expected approximately 5 months after the ewe is bred. From 50 to 75 percent of the ewes should conceive during the first heat period. Most ewes should therefore lamb within a 6-week period. To have early lambs in January and February, the ram would be turned in during August; later lambs in May would require the ram to be turned in during late November.

## LAMBING

The basic supplies necessary at lambing time include something to use in drying the lambs; 7% iodine solution for treatment of umbilical cord; paint brands or some other form of temporary identification; propylene glycol for treatment of pregnancy disease should this be necessary.

As lambing approaches, the ewe will appear restless and the fetus will seem to drop to a lower position in the ewe. She will tend to keep to herself, and her vulva and udder will become swollen.

When parturition, or birth, occurs, the ewe will expel a water bag first, and shortly after this she should give birth. Consult the references at the end of this

bulletin for information concerning normal presentation of the lamb and additional information concerning both normal and abnormal presentations.

## SHEARING

Shearing is usually done in the spring of the year and can either be done by a custom shearer or by the flock owners if they possess the necessary time and skill. Locating persons who custom shear may be a problem, so contact the state sheep specialist or your county extension agent for more information. Other sources may include the various agricultural publications in the state along with other people associated with the sheep industry in Michigan.

## INCOME POSSIBILITIES

Income will be generated from the sale of lambs, cull ewes and wool. Lambs may be sold as feeder lambs at 40 to 60 pounds or as market lambs weighting between 100 and 120 pounds. Lambs born early — January and February — that are grain fed, may be marketed by late spring, while later lambs are usually marketed in the fall.

Although wool is usually marketed after shearing, it may be stored in a dry place in expectation of higher prices. The wool price support program as administered by the local A.S.C.S. office is discussed later in this bulletin.

Cull ewes will bring in only a nominal amount of income due to relatively low prices, coupled with the probability that no more than 20% of the ewes will be replaced annually, and 20 to 25% of these (4 to 5% of total flock) will be replaced because of death.

The cash flow turnover for sheep is relatively slow compared with swine and poultry enterprises, but faster than cow-calf operations. For the majority of producers, income from one crop of lambs and one shearing of wool per year can be expected from each ewe.





# Will Sheep Fit My Farm?



One of the first steps after establishing your interest in an enterprise is to determine its physical and financial requirements and its potential profit.

It is necessary to estimate the livestock-carrying capacity of your farm or, conversely, to estimate the forage acreage required for a given sized ewe flock. For example, a small producer may start with a one-ram flock. One mature ram can service up to 40 ewes. To estimate pasture land needs, each ewe will consume, on the average, about 3 to 3.5 pounds of forage dry matter per day during the grazing season or about 600 pounds of forage dry matter during a 6-month grazing season. Thus a pasture producing 1.5 to 2 tons of forage dry matter per acre would support about 4 to 5 ewes per acre, or 8 to 10 acres of pasture would be required for 40 ewes. Woodland pasture and other lower-yielding pastures would require proportionately more land per ewe.

Hay must be provided for approximately 6 months of the year. To estimate the required amounts of hay, one 150-pound ewe will consume an average of 4.0 to 4.5 pounds of hay per day or 720 to 810 pounds per ewe per

winter season. For hay land producing 3 to 4 tons per acre, each acre will support 8 to 10 ewes. Thus, you would need approximately 4 to 5 acres of hay land to support a 40 ewe flock.

The above estimates of pasture and hay land needs are quite general and illustrative in nature. More accurate and specific estimates of the required feed on a particular day or period will be influenced by size of ewe and her stage of production; i.e., gestation, lactation or maintenance.

Some facilities in the form of woven wire fencing, lambing pens and sheds, plus handling and feeding equipment will also be required. See Table I.

The list in Table I assumes some type of barn or shed is currently available. Approximately 12 to 16 square feet of floor space is required per ewe when confined to shelter. Each lambing pen should contain 20 to 25 square feet. Thus, a 40-ewe flock would require a shed of 700 square feet of space.

To the equipment cost, you must add the cost of breeding stock. With ewes selling from \$80 to \$135 per head, depending on age and condition, you should expect your initial investment for equipment, 40 ewes, and 1 ram to

range from \$3,400 to \$5,600 (early 1980 prices).

## SELECTING BREEDING STOCK

When buying sheep for the first time, ask an experienced sheep producer or someone familiar with livestock evaluation to advise you in selecting desirable rams and ewes. Avoid buying sheep from a flock containing animals that limp, have loose wool, runny eyes or nose or have lumps on their body.

## What To Look For

Always examine the mouths and udders of ewes, and don't buy "gummer" or "broken" mouth ewes or those ewes whose upper and lower jaws do not meet. Sheep have incisor teeth on their bottom jaw only. Year-old ewes have 2 large permanent teeth and 6 small teeth. Each year thereafter, an additional set of permanent teeth is added and 2 small teeth are lost. At 4 years of age, the ewe has a full mouth of 8 large permanent teeth. As ewes age, they can lose teeth and have a "broken" mouth and eventually become a gummer, which prevents effective grazing. The expected productive lifetime for a ewe is 5 to 6 years.

Desirable udders on ewes have two equally developed mammary glands and functional teats that are soft and pliable. Avoid buying ewes that have lopsided, low hanging udders or damaged teats.

## WHAT BREED TO BUY

Various breeds of sheep may fit into a small sheep enterprise. Breeds tend to be classified either as wool or meat breeds and ram breeds or ewe breeds. Most breeds of commercial interest in Michigan will emphasize lamb production. A summary of sheep breeds and characteristics that the small flock owner might consider are represented in Table II.

Commercial sheep producers who make their living with 500 to 1,000 ewe flocks rely on the white-faced ewe breeds listed in Table II, and cross-breed them to the black-faced ram

**Table I—Selected List of Facilities for a 40-ewe Flock of Sheep**

	Quantity	Price/Unit	Cost
Fence (10 acres of pasture*)			
Woven wire .....	160 rd	\$65/20 rd	\$520.
Steel posts .....	152	\$2.25/post	342.
Corner posts .....	12	\$6/post	72.
Staples .....	—	—	13.
Lambing pens (use light-weight, hinged gates) .....	1 pen/5 ewes	\$7.50	60.
Heat lamps .....	4	12.00	48.
Waterer (freeze-proof) .....	1	125.00	125.
Salt-mineral feeder .....	1	75.00	75.
Feed racks .....	18"/ewe	60.	60.
Emasculator .....	1	54.00	54.
Hoof trimmers .....	1	16.00	16.
Electric sheep shears .....	1	79.50	79.50
2-oz. drenching syringe .....	1	11.00	11.
Vaccination syringes (box of 20 disposable)	—	—	7.50
Estimated investment in equipment .....			\$1,483.00

\*Woven wire fence is the most common type of fence for sheep. A new type of electric fence development in Australia is becoming available that is cheaper to build, easier to move and may be more effective in controlling predator animals.



**Table II—Summary of Sheep Breeds and Characteristics.**

Ewe Breeds	(Avg. Mature Weight)		Growth Rate	Prolificacy	Milking ability	Fleece Wt. Lb.
	Rams	Ewes				
Rambouillet	200-250	140-180	H	L-M	L-M	10-12
Corriedale	180-220	130-150	M	M	M	10-12
Finnsheep	175-225	120-160	L-M	H†††	H	5-7
Columbia	225-300	150-200	H	M	M	10-12
Dorset	175-225	130-160	M-H	M-H	H	5-8
Targhee	220-280	150-200	M-H	M	M	10-12
<b>Sire Breeds</b>						
Suffolk	250-350	190-240	H†††	H	H	4-7
Hampshire	250-300	175-225	H	M-H	H	6-8
<b>Coarse, Long Wool Breeds For Easy Spinning</b>						
Lincoln	250-350	200-250	L-M	L	L-M	10-15
Romney	200-275	150-200	L-M	L	L-M	8-12

L—LOW; M—MEDIUM; H—HIGH

†††Adapted from *The Sheepman's Production Handbook*, Sheep Industry Development Program, Denver, Colorado

breeds for fast gaining, muscular slaughter lambs.

The commercial sheep producer should develop a systematic crossbreeding program to take advantage of the hybrid vigor as expressed by multiple births and rapid growth of lambs. For small flocks, it is easier and possibly advantageous to establish a ewe flock of

one breed, purchase rams from a different breed, sell all the crossbred ram lambs and raise ewe replacement stock as needed to maintain flock size. For those new to the sheep business, it is advisable to purchase mature commercial ewes to establish the flock as opposed to ewe lambs in order to minimize lambing difficulties.

## Can I Raise Sheep?

Keys to managing a sheep flock successfully include these practices: providing balanced rations; maintaining sanitary conditions; observing daily; and establishing an overall flock health program with some assistance, if necessary, from your local veterinarian and/or MSU Cooperative Extension personnel.

A serious problem in the sheep industry today is control of predators. Dogs and coyotes will kill and injure sheep for the fun of it. This necessitates sound fence construction.\*

As sheep have limited resiliency to disease, the best policy is to prevent occurrence of disease or its development past the initial stages. Good shepherds develop a feel for sheep in order to anticipate and eliminate disease-causing conditions. Some common diseases of sheep are the following:

### PNEUMONIA

**Symptoms** — Lambs become weak, refuse feed, appear gaunt, increased respiration rate.

**Prevention** — Keep lambing facilities clean, dry and well ventilated. May add tetracycline antibiotics to creep ration if annual problem.

### FOOT ROT

**Symptoms** — Extreme lameness in the foot and swelling of the foot.

**Prevention** — Keep feet trimmed. Keep sheep away from wet, marshy, or muddy areas. Keep any infected animals separate from the rest of the flock.

### LAMB DYSENTERY (Scours)

**Symptoms** — Usually occurs in lambs from 2-5 days old. Lambs show scouring and are weak and unable to nurse.

**Prevention** — Sanitation, keeping lambs warm and in a well-ventilated, lighted enclosure.

### OVEREATING DISEASE (Enterotoxemia)

**Symptoms** — Difficult to diagnose. There is loss of weight, lambs show depression, and go off feed.

**Prevention** — Vaccinate lambs and ewes 10-14 days before placing on pasture or into the feedlot. If lambs are on a high energy feeding program, they should be re-vaccinated in 2 weeks.

Another area of extreme importance is the control of internal and external parasites. Inexperienced sheep managers can obtain help on establishing a proper parasite control program by consulting with their local veterinarian, state extension sheep specialist and references listed at the end of this publication. Parasites are probably responsible for more losses in the sheep industry than any other single item, but it is a manageable problem.

## Will My Sheep Be Profitable?

If sheep are a production enterprise and not a hobby, their desirability is directly related to their profitability. To determine potential profitability, it is useful to prepare an enterprise budget that lists and specifies those factors influencing the income and expenses associated with sheep production.

### SALES FACTORS

Factors influencing the income per ewe include lamb price, wool price and the number of lambs marketed per ewe per year. Lamb prices exhibit a seasonal pattern within a year, with price tending to peak in June and hitting bottom in August and September as the end of the grazing season approaches.

To sell finished market-weight lambs in late spring requires January lambing and creep feeding. The economics question that must be asked is whether the possible benefit of selling lambs early at the higher market more than offsets the increased cost of creep feeding over grass-fed lambs. You must also consider possible adverse effects on the lamb crop and increased facility requirements because lambs are being born during the coldest part of the winter. The state average lamb crop is 103% as expressed by the Michigan Department of Agriculture; however, with selection of females that are twins



and by good management, your production should be significantly higher than this.

### COST CONSIDERATIONS

The most important cost factor is feed. It will account for 60 to 80 percent of the total expense to maintain a ewe flock and produce lambs. However, since much of this feed expense is for forage and will be provided from on-farm production, the actual cash flow dollar expenditure is much less than if a full cost-accounting procedure is used.

The health of the lambs and ewe flock is also instrumental in securing a profit from the sheep enterprise. A well-managed feeding program and a sound health management program to prevent, rather than cure, diseases are necessary to insure success. As the total income potential per ewe is limited, the tasks of docking and castrating lambs, providing internal and external parasite control, plus other preventive medicinal practices must be carried out on a regular basis to minimize sheep losses and veterinary expenses.

### ENTERPRISE BUDGET

An enterprise budget to illustrate the income and expense associated with the ewe flock is presented in Table III. Preparation of an enterprise budget forces you to plan ahead and to consider the consequences of decisions. Table III suggests the type and level of income and expenses that could be experienced in the ewe flock. Omitted in Table III is an interest charge against the investment costs in breeding stock and associated equipment. In times of high interest rate, the amount can be significant, depending on your perception of return on alternative investments.

This budget format has the advantage of identifying the influence of specific cost and income items, thus allowing you to rank them according to importance.

Probably the two most important items influencing profit are the percent lamb crop and the feed cost. The shepherd entrepreneur has direct influence over these items. As illustrated in Table IV, an increase in the lamb crop from 120 percent to 130 percent would increase income by \$8 per ewe but feed costs would increase by only \$3

per ewe. Most other costs could be expected to remain about the same, and net income per ewe would increase by \$5 per ewe. Similar calculations to illustrate the profit opportunities of a 200% lamb crop are shown in Table V.

As Table III suggests, if all feed must be purchased at the going market price, the profit potential is limited and

possibly negative. However, one of the main functions of a sheep enterprise, and where sheep fit best, is to fully utilize those forages that were previously under-utilized. Thus, the dollars actually spent on forages could be less than that illustrated in the budget, and a positive cash flow would result, given the other dollar amounts in the budget.

**Table III—Income and Expenses of a 120% Lamb Crop Marketed**

	Per Ewe	Per 40 Ewes
<b>Gross income</b>		
Lambs (120%) (110 lb/lamb) (70¢/lb) .....	92.40	3,696
Ewes (15%) (160 lb/ewe) (30¢/lb) .....	7.20	288
Wool 8#/ewe (1.23/lb) .....	9.84	393.60
Lamb incentive (1.10 cwt) (5 lb wool/ewt lamb) (.424/lb wool payment)(1.2 lambs/ewe) .....	2.80	112.
1. Estimated gross income/yr .....	112.24	4,489.60
<b>Feed</b>		
Pasture .25 Ac/ewe & lamb @ 20 .....	5.00	200
Hay 180 da/ewe @ 4.5#/da @ .04 .....	32.40	1,296
Grain 80#/ewe @ .045 .....	3.60	144
Grain (lamb) 300 @ .056 × 1.20 .....	20.16	806.40
Hay (lamb) 300 @ .04 × 1.20 .....	14.40	576
Trace mineral salt .....	.60	24
2. Estimated feed costs/ewe/yr .....	76.16	3,046.40
<b>Non-feed production expenses</b>		
Veterinary and medicine .....	1.50	60
Supplies .....	1.00	40
Shearing .....	1.00	40
Marketing and transportation .....	1.25	50
Bedding 100 lb @ \$60/T .....	3.00	120
Repairs .....	.50	20
Utilities and fuel .....	.75	30
Interest on feed and cash expenses (12%) .....	4.92	196.80
3. Estimated non-feed costs/ewe/yr .....	13.92	556.80
<b>Fixed overhead expenses</b>		
160# ewe replacement cost \$100/ewe—(1.6 cwt) (30)/cwt .....		
5 yr use .....	10.40	416
300# Ram replacement cost \$200/ram—(3.00 cwt) (30)/cwt ÷ 40 ewes/ram .....		
3 yr use .....	.92	36.80
Building depreciation .....	—	—
Equipment depreciation .....	3.60	144
Labor 3 hr/ewe @ \$4/hr .....	12.00	480
4. Estimated fixed expense .....	26.92	1,076.80
5. <b>TOTAL ESTIMATED EXPENSES</b> .....	117.00	4,680
6. Estimated return over feed and cash production expense .....	22.16	886.40
7. Estimated return over total expenses .....	-4.76	-190.40



## CASH FLOW BUDGET

It may also be helpful to prepare a cash flow budget. This technique itemizes the actual dollars expected to be spent and received. The objective is to determine if the checkbook will show a positive balance at the end of the production year. Preparation of both the enterprise and cash flow budget should help you determine the financial wisdom of investing in a ewe flock enterprise.

# The Government Program

The U.S. Department of Agriculture through the Commodity Credit Corporation has a price support program for wool. It is administered on a county basis by the Agricultural Stabilization and Conservation Service (ASCS).

The purpose of this program is to support the price of short raw wool at a

given level as announced annually by the Secretary of Agriculture. The support price for the marketing year in 1980 is \$1.23 per pound.

The reason for the incentive, or support, level is to encourage production of wool, which is considered a strategic commodity. The program, funded by tariff monies collected on imported wool, permits producers to contribute 2½¢/cwt. of unshorn wool marketed and 12½¢/cwt. of unshorn market lambs to the American Sheep Producer Council for advertising lamb and wool.

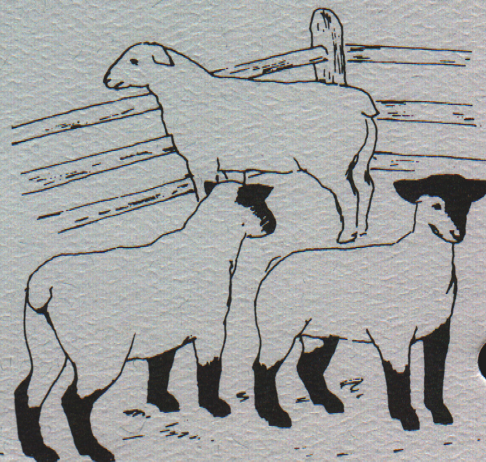
Price support payments are available also for unshorn lambs or (pulled wool) marketed. The "rate of payment will be 80 percent of the difference between the national average price per pound received by producers for shorn wool during a specified marketing year and the support price per pound of shorn wool multiplied by the average weight of wool per hundredweight of animals (5 pounds). The exact rate of payment will be determined and announced after the end of that marketing year, as a specified amount per hundredweight of live animals."

The marketing year for lamb and wool is the calendar year (January 1 through December 31). Proof of sale including the date, the buyer's name, the weight sold and the price received per pound must be filed with the ASCS office in the producers' respective counties before the end of the marketing year.

Further information may be obtained from the Agricultural Stabilization and Conservation Service office in your county.

**Table IV — Income and Expenses of a 130% Lamb Crop Marketed**

	Per Ewe	Per 40 Ewes
<b>Gross income</b>		
Lambs (130%) (110 lb/lamb) (70¢/lb) .....	100.10	4,004.00
Cull ewes (15%) (160 lb/ewe) (30¢/lb) .....	7.20	288.00
Wool (8#) (1.23/lb) .....	9.84	393.60
Lamb incentive (1.10 cwt) (5 lb wool/cwt lamb) (.424/lb wool payment)(1.3 lambs/ewe) .....	3.03	121.20
<b>1. Estimated gross income/yr .....</b>	<b>120.17</b>	<b>4,806.80</b>
<b>Feed</b>		
Pasture .25 Ac/ewe & lamb @ \$20 .....	5.00	200
Hay 180 da/ewe @ 4.5#/da @ .04 .....	32.40	1,296.00
Grain 80#/ewe @ .045 .....	3.60	144.00
Grain (lamb) 300 @ .056 × 1.30 .....	21.84	873.60
Hay (lamb) 300 @ .04 × 1.30 .....	15.60	624.00
Trace mineral salt .....	.60	24.00
<b>2. Estimated feed costs/ewe/yr .....</b>	<b>79.04</b>	<b>3,161.60</b>
<b>Non-feed production expenses</b>		
Veterinary and medicine .....	1.50	60
Supplies .....	1.00	40
Shearing .....	1.00	40
Marketing and transportation .....	1.25	50
Bedding 100 lb @ \$60/T .....	3.00	120
Repairs .....	.50	20
Utilities and fuel .....	.75	30
Interest on feed and cash expenses (12%) .....	5.08	203.20
<b>3. Estimated non-feed costs .....</b>	<b>14.08</b>	<b>563.20</b>
<b>Fixed overhead expenses</b>		
160# ewe replacement cost		
\$100/ewe — (1.6 cwt) (30)/cwt		
5 yr use	10.40	416
300# Ram replacement cost		
\$200/ram — (3.00 cwt) (30)/cwt ÷ 40 ewes/ram		
3 yr use	.92	36.80
Building depreciation .....	—	—
Equipment depreciation .....	3.60	144
Labor 3 hr/ewe @ \$4/hr .....	12.00	480
<b>4. Estimated fixed expense .....</b>	<b>26.92</b>	<b>1,076.80</b>
<b>5. TOTAL ESTIMATED EXPENSES .....</b>	<b>120.04</b>	<b>4,801.60</b>
<b>6. Estimated return over feed and cash production expense .....</b>	<b>27.05</b>	<b>1,082.00</b>
<b>7. Estimated return over total expenses .....</b>	<b>.13</b>	<b>5.20</b>





# Where Can I Sell Lambs?

Many of the marketing outlets used by lamb producers are those used by other livestock producers. In Michigan, the primary country marketing outlets are Michigan Livestock Exchange, who sponsors lamb pools in addition to their regular marketing channels.

Michigan Livestock Exchange conducts lamb pools from June through

March with 10 pools at Portland, one at Lincoln, three at West Branch and one at Rudyard.

Lambs are typically sold on the Wednesday before the pool and the top of the market is established. Producers can then take their lambs to the pool on Saturday, knowing the maximum price they can receive. The lambs are then

graded and weighed by a representative of the Michigan Livestock Exchange, and a check issued to the producer.

In addition to the lamb pools, Michigan lamb producers may market their lambs through any of the 8 livestock markets operated by Michigan Livestock Exchange. These include Battle Creek, St. Louis, Cass City, Portland, Cassopolis, Zeeland, Manchester and Sturgis.

The 10 to 20% of the lambs not handled by Michigan Livestock Exchange are marketed through some 25 to 30 smaller markets. Few lambs are currently marketed directly to packers. Another alternative market outlet may be selling locally to a butcher and subsequent direct sale to the customer.

**Table V — Profit Opportunities for a 200% Lamb Crop Marketed**

	Per Ewe	Per 40 Ewes
<b>Gross income</b>		
Lambs (200%) (110 lb/lamb) (70¢/lb) .....	154.00	6,160.00
Ewes (15%) (160 lb/ewe) (30¢/lb) .....	7.20	288
Wool 7#/ewe (1.23/lb) .....	8.61	344.40
Lamb incentive (1.10 cwt) (5 lb wool/cwt lamb) (.424/lb wool payment)(2 lambs/ewe) .....	4.66	186.40
1. Estimated gross income/yr .....	174.47	6,978.80
<b>Feed costs</b>		
Pasture .25 Ac/ewe & lamb @ 20 .....	5.00	200
Hay 180 da/ewe @ 4.75#/da @ \$.04 .....	34.20	1,380
Grain 140#/ewe @ .045 .....	6.30	252
Grain (lamb) 300 @ .056 @ 2.00 .....	33.60	1,344
Hay (lamb) 300 @ .04 @ 2.00 .....	24.00	960
Trace mineral salt .....	.60	24
2. Estimated feed costs/ewe/yr .....	103.70	4,160
<b>Non-feed production expenses</b>		
Veterinary and medicine .....	1.50	60
Supplies .....	1.00	40
Shearing .....	1.00	40
Marketing and transportation .....	1.25	50
Bedding 100 lb @ \$.60/T .....	3.00	120
Repairs .....	.50	20
Utilities and fuel .....	.75	30
Interest on feed and cash expenses (12%) .....	6.57	262.80
3. Estimated non-feed costs/ewe/yr .....	15.57	622.80
<b>Fixed overhead expenses</b>		
\$100/ewe replacement cost		
(1.60 cwt) (30)/cwt — 5 yr .....	10.40	416
200# Ram replacement cost		
(3.00 cwt) (30)/cwt — 3 yr .....		
40 ewes .....	.92	36.80
Building depreciation .....	—	—
Equipment depreciation .....	3.60	144
Labor 3 hr/ewe @ \$4/hr .....	12.00	480
4. Estimated fixed expense .....	26.92	1,076.80
5. <b>TOTAL ESTIMATED EXPENSES</b> .....	<b>146.19</b>	<b>5,847.60</b>
6. Estimated return over feed and cash production expenses .....	55.20	2,208.00
7. Estimated return over total expenses .....	28.28	1,131.20

## Are Records Necessary?

A record-keeping system is important to a successful farm business. At a minimum, it is necessary for income tax purposes to record all cash income and cash expense items as well as depreciation.

To improve performance of the ewe flock, the analysis of physical production records is helpful.

Keeping track of breeding dates in order to correctly anticipate lambing time can improve the lamb crop. One way to do this is to use a marking harness on the ram during breeding season. Knowing which ewes have twins, singles or lose their lambs will assist in culling ewes and selecting replacement stock.

Being aware of the feeding program at various stages of the sheep production cycle will assist in producing a healthy, growthy lamb crop. Other records to assist the flock health program may be knowing the medicinal dosages previously administered for particular ailments or scheduling regular preventive treatment in your flock health program, for example, the schedule for internal parasite control. It is important to recognize those items that directly influence the production of the ewe flock and to be able to act at the correct time.



# Sheep and Their Potential

The lamb industry in the United States has been declining in terms of numbers produced. Several partial explanations for this decline are: lamb consumption per capita has trended down due to consumer preferences and/or higher lamb price relative to other meats, less demand for wool in the past although that may now be changing, and increasing problems including predators. However, the Michigan lamb industry continues to slaughter more lambs than it produces. In addition, the Detroit market is one of the higher lamb consumption and

slaughter centers in the United States. It appears that Michigan has a viable lamb market that compares favorably with other areas of the country.

At the farm level, the small ewe flock cannot be expected to provide a large proportion of living expenses. However, under current and expected lamb price levels, it does appear that the small ewe flock can modestly increase the net cash income for those farms that have underutilized forages and have available some time that can be devoted to managing a ewe flock.

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## Small Ewe Flock Publications Available

*"Ewe Flock: Opportunity for Supplemental Income,"* by G. Blank, MSU Extension Bulletin E-843.

*"Sheep Buildings and Equipment: A Catalog of Plans,"* by J. Boyd and H. Ritchie, MSU Extension Bulletin E-1058.

*"A Dozen Ways to Save Lambs"* by G. Blank and C. Beck, MSU Extension Bulletin E-681.

*"Controlling Internal Parasites of Sheep,"* by G. Blank, et al., MSU Extension Bulletin E-479.

*"Controlling Insects and Mites on Sheep and Goats"* by D. Cress, MSU Extension Bulletin E-836.

*"Contagious Foot Rot in Sheep,"* by C. Beck and G. Blank, MSU Extension Bulletin E-507.

*"Enterotoxemia, Overeating Disease of Sheep and Lambs,"* by C. Beck, et al. MSU Extension Bulletin E-487.

These Extension bulletins are available from County Extension offices or the MSU Bulletin office (Room 10 Agriculture Hall), P.O. Box 231, East Lansing, MI 48824. Order by E number, e.g. E-843.

*Nutrient Requirements of Sheep.* 1975  
National Academy of Sciences  
Office of Publications  
2101 Constitution Avenue  
Washington, D.C. 20418

*The Sheepman's Production Handbook*  
American Sheep Producers' Council  
200 Clayton Street  
Denver, Colorado 80206

