

SHEEP RAISING IN THE UPPER PENINSULA



The Good Shepherd Leads His Flock

MICHIGAN STATE COLLEGE
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SHEEP RAISING IN THE UPPER PENINSULA

BY G. W. PUTNAM AND V. A. FREEMAN

When the sheep boom occurred in the Upper Peninsula of Michigan about 10 years ago, many sheep were brought into that area under conditions which precluded any possibility of success. Most of the flocks were large. Their owners were experienced men, but, in most cases, they were not familiar with cut-over lands and, for this reason, were not prepared to handle their flocks under Upper Peninsula conditions.

A few of the large flocks have survived and are now successfully established. Many of them, however, have been broken up into smaller flocks, and these smaller flocks are showing the way to profitable sheep husbandry on the farms of the Upper Peninsula.

Before the increased interest in sheep ten years ago, there were several profitable small flocks in the area, and these smaller flocks have continued to increase in spite of the reverses which occurred among the owners of the larger flocks.

This bulletin has been prepared for the purpose of helping to point out some of the lessons on sheep management which have been learned in the Upper Peninsula in the past 10 years.

ADAPTABILITY OF SHEEP TO THE UPPER PENINSULA

Sheep are admirably adapted to northern Michigan conditions and produce a crop of wool which may be sold in the spring and a crop of lambs which are ready for the fall market.

Distance from market is no hindrance to profitable management as wool is not perishable and lambs stand shipment well.

Sheep utilize a maximum of pasture and roughage with a minimum of expensive grain, and clover hay and root crops provide an ideal winter ration for them. A healthy lamb will get fat enough for market on pasture. Sheep require less investment in buildings and equipment than other classes of livestock and little labor is required to handle a flock of sheep.

UTILIZING CUT-OVER PASTURE LANDS

The reason for the increased number of sheep in the Upper Peninsula 10 years ago was the excellent pasture conditions on the cut-over lands of the Upper Peninsula. The men who failed in the sheep business did not realize that there are certain natural hazards to the pasturing of this wild land which must be taken into consideration if severe losses are to be avoided.



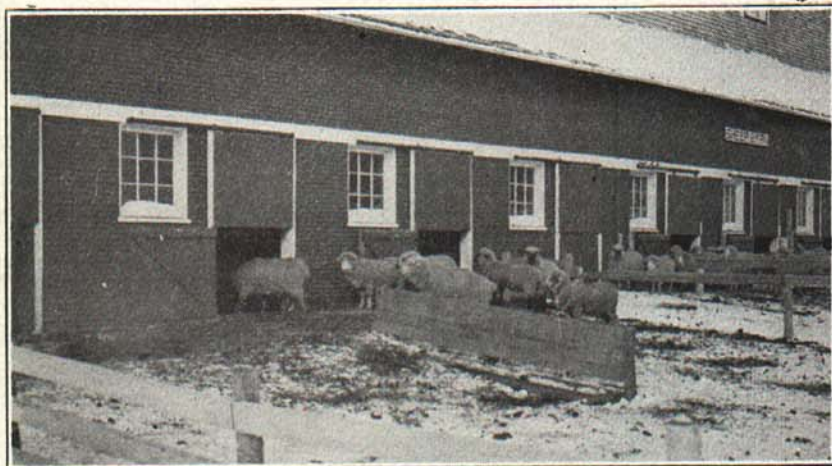
Sheep on Cut-over Pasture

These hazards are, in the order of their importance, predatory animals, straying, and fire. Each of these factors took its toll from the large flocks which were turned loose with a shepherd on cut-over pasture. Fences are a partial solution of the problem. The advantage that State trappers have of controlling predatory animals when the sheep are confined to a given pasture, as compared to the control obtained on unfenced areas, enables them nearly to eliminate losses from predatory animals and straying. If the cut-over pasture contains and joins "slash," a fire lane should be established before fences are built. Lack of winter feed was another cause of many losses. Plow land was not cleared on which to grow the feed, and shipping it in was too costly.

FENCES AND BUILDINGS

Sheep cannot be successfully managed in Michigan unless they are confined to restricted areas, where they may be given proper supervision. It is often possible to select an area for pasture where rivers or creeks will form natural barriers and reduce the amount of fence required.

Fences to confine sheep should be built of woven wire. A standard fence for all classes of livestock is one 47 inches high with 10 line wires, 16 stays to the rod. Number 9 top and bottom wires and number 11 filler are most satisfactory. This fence should have at least one barb wire four inches above the woven wire, and likewise one just above the ground, to discourage animals from crawling under the fence. Another common type of fence is one with woven wire 32 inches high, with three barb wires above and one below. The bottom of the fence should follow the ground very closely.



In Winter Quarters

Where "cradle knolls" are plentiful, it will be found advantageous to break and level the fence row, thus establishing a fire line; or, at least, a pick and shovel should be used to level off the knolls. A good fence can be built for about one dollar per rod, and it is an effective discouragement to many dogs and predatory animals. In building a fence, keep in mind that it is a permanent improvement to the property and, if well built, is good for a number of years.

The buildings for the care of sheep can be of simple construction and

need not be expensively built. Elaborate equipment is neither economical or essential to successful management of the flock. Confinement in dark, poorly ventilated quarters is very detrimental to breeding ewes. Except during very stormy weather or when ewes are lambing early in the season, the barn should be open on the south or east, allowing the sheep to remain outside if they so desire. Plenty of windows should be provided to furnish abundance of light when the doors are closed. When it is necessary to close the doors, ventilation must also be provided. Fresh air may be obtained through open or muslin screened windows on the side opposite to that from which the wind is coming. Foul air should be removed through flues extending from the ceiling to a cupola on the roof. In building with shed roofs, ventilating flues should be built above the roof. Drafts may be avoided by keeping the building closed on the side from which the wind is coming. It is not necessary that the barn be warm. A single thickness of lumber will usually be sufficient for the walls.

The site selected for the location of the sheep barn should be dry and well drained, and a southern or eastern slope is preferable. Ample yard space adjoining the barn should be available for winter exercise. A wind-break of trees on the north and west adds much to the comfort of the flock. The buildings should be so located that they can be easily reached from both the pastures and the fields where winter feed is grown. It is often advisable to give the flock access to the barn during the summer to afford protection from storms and to provide shade where the sheep will not be bothered by flies during hot weather.

The most important requisites of a satisfactory sheep barn are that it be dry both under foot and over head, well ventilated, and free from drafts. A well-drained earth floor, somewhat higher than the ground level outside the barn, is most desirable in the sheep shed.

Where lambs are coming early in the season, warm quarters should be provided for ewes and quite young lambs. Storage space should be provided for from six to eight hundred pounds of hay for each sheep wintered.

SIZE OF FLOCK

The size of the flock that any one person should own will depend on so many things that only a few suggestions can be offered as a guide. To the experienced sheep man who knows how to handle sheep the limiting factors which would perhaps determine the size of his flock would be the area of fenced pasture, the size of his buildings, and the quantity of winter feed available. The inexperienced man who wants to get into the sheep business should start with a small flock of from 25 to 30 breeding ewes. Even though abundant pasture and excellent winter conditions are available, it will be

well to start on a small scale and learn the details of successful management before risking a large investment. Small flocks usually do better than large flocks, and unless a thorough understanding of the animals and the essentials of success can be attained with a small flock it is futile to enlarge the business or even to continue on a small scale. The experienced man who has sufficient pasture and winter feed should plan on increasing his flock to 200 ewes, and thus have a carload of lambs and ewes to market each year.

BREEDS OF SHEEP RECOMMENDED

The Hampshire, Oxford, Shropshire, Rambouillet, and Blacktop Delaine breeds of sheep are well adapted to conditions existing in the Upper Peninsula. The first three mentioned—the Hampshire, Oxford, and Shropshire, are mutton breeds of sheep. The Rambouillet and Delaine are fine wools. Western ewes are also well adapted. The western ewe which has a preponderance of fine wool blood, and Rambouillet or Delaine ewes are especially valuable because of their heavy shearing ability, hardiness, and longevity. These sheep are not as quick-maturing nor of as good mutton conformation as are the Hampshire, Oxford, or Shropshire. The fine wool or fine wool grades should, therefore, be bred to a ram of one of the mutton breeds to produce market lambs. With the flock that is well established, a sufficient number of ewes to produce ewe lambs for replacements may be bred to one of the fine wool rams to maintain the flock. The remainder of the ewes may be bred to a mutton ram to produce market lambs. With small flocks, most breeders find it profitable to develop a high grade flock by the continued use of a purebred Hampshire, Oxford, or Shropshire ram.

MARKETING THE SURPLUS

After the flock is once established, there should be a surplus of stock to market each year. Under Upper Peninsula conditions, it has been found that the fall of the year, before the close of the season, is a desirable time to market this surplus. During the first two or three years after the flock is established, there should not be many culls to come out of the flock, but there will be a few ewes which failed to breed or which have bad udders. These should be marked at lambing time and should go to market each year with all of the wether lambs and such of the ewe lambs as are not wanted to maintain or increase the breeding flock. After a flock of the desired size is attained, it is advisable to keep back from market about one-sixth as many ewe lambs as there are breeding ewes in the flock. This number added each year will just about replace culls and losses in an average flock.

Local markets do not as a rule offer a favorable or remunerative outlet for fat lambs, and there is at present no local market for feeder lambs. Any of the large central markets, such as Chicago, offers a satisfactory and remunerative market for both fat and feeder lambs. Less than carload shipments are very expensive. To facilitate marketing and to reduce the cost, there should be at least 125 head of sheep for sale within hauling or trucking distance of a central shipping point. The cost of marketing is still further reduced if from 200 to 300 head, or sufficient for a double-deck carload, are available at one point. Any number of owners can ship together, and by marking the lambs each man will receive pay for the lambs which he consigned, with his proportionate share of the expense deducted.

Cooperative shipping associations offer the most efficient means of marketing farm livestock. The Upper Peninsula should have many such organizations.



Winter Grazing

MANAGEMENT OF FLOCKS ON PASTURE

Because the cost of maintaining ewes on pasture is less than on dry feed, it is important that the flock be kept on pasture as long as possible. There is more nutrition in dry pasture late in the fall than in the same feed before new growth starts the following spring. It is therefore better to leave the sheep out as late in the fall as they can obtain plenty of feed by digging through the snow than to turn them out in the spring as soon as the snow goes off. Fields which are near the buildings should not be pastured during the latter part of the sum-

mer. These fields then will have a good growth of grass and the ewes can paw through some snow and uncover plenty of feed. If this pasture is conveniently located, the flock can then be brought in easily any time a heavy storm makes it advisable.

It is well worth while to have three or four different pastures, or else have one large pasture cross-fenced so that the sheep can be changed every few weeks. This not only increases the pasture growth but also aids materially in keeping down internal parasites, which increase readily on pasture with our summer climate. The following pasture arrangement could be modified to suit conditions:

<p>#1 Pasture closest to buildings reserved for late fall and early spring use.</p>	<p>#3</p>
<p>#2 Numbers 2, 3, and 4 are used in rotation.</p>	<p>#4</p>

Pastures number 2, 3, and 4 should be arranged to facilitate changing the sheep from one to another. The flock can be left in one of them until it is pastured closely (but not more than three or four weeks) and then changed to another. If the water supply and salt boxes can be located near the gates, the work of rounding up the flock for changing is very light. In fact, part of the flock can be transferred at a time, and the remainder will be found at the gate within a day or two. The flock should be visited daily, or at least once a week, to replenish the salt supply and see that everything is well. It is a good plan to count the sheep, if possible, at each visit to check up on any possible losses from predatory animals or other causes.

Whenever symptoms of stomach worms show up, such as weakness, paleness of the skin and mucous membranes of the mouth and eyes, or lack of dark red color in the network of blood vessels under the eyelids, the whole flock should be drenched according to directions which can be obtained from the Extension Service of the Michigan State College. Valuable information on sheep parasites is contained in U. S. D. A. Farmer's Bulletin No. 1330.

Ticks can easily be seen at shearing time. The sheep louse, also

quite common in Michigan flocks, will make its presence known by the uneasiness of the sheep, which will rub their backs or bite their sides giving the wool a rough and ragged appearance before shearing. These lice are hard to see and are present in many flocks for years before the trouble is recognized by the owners. Thorough dipping of the whole flock is the best remedy if any ticks or lice are present, and the small expense and labor required are repaid in increased returns from treated flocks. Cooperative ownership of dipping equipment is advantageous for small flock owners.



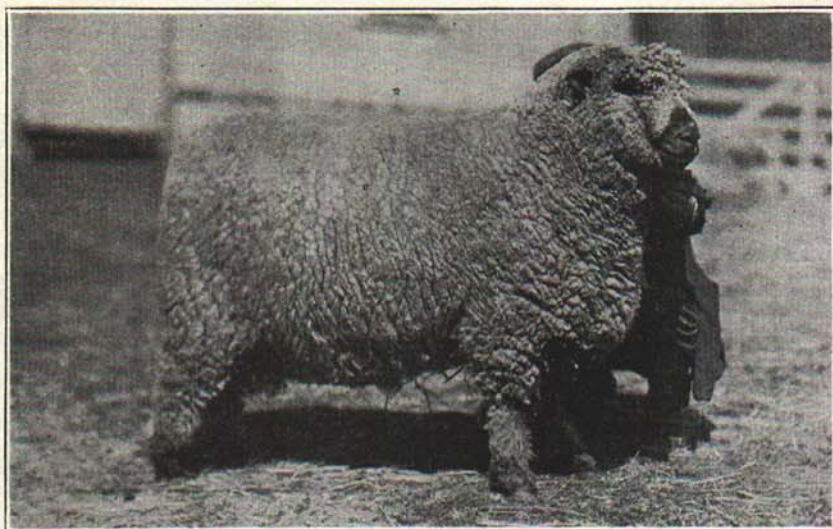
Dipping Sheep

The tank should be four feet deep, two feet wide at the top, one foot wide at the bottom, three feet long at the bottom, and eight to ten feet long at the top. It may be made of galvanized steel, which is convenient for moving from one farm to another, or it may be built with concrete and set permanently in one place. The drainage board should be arranged so that the dip which runs off the sheep as they come out of the tank will run back into the tank. It should be large enough for four to eight sheep. Side boards and an end gate to hold the sheep on the drainage board are essential. The tank should be set down into the ground from one-half to two-thirds of its depth. Owners of large flocks will find it profitable to use a longer tank, with a system of catch pens and a narrow alley for driving and forcing the sheep through the tank, but small flocks are usually handled in small catch pens close to the tank with each sheep caught and dropped into the dip by hand.

BREEDING TIME

The lambs should be weaned by the time they average five months of age. As soon as the ewes are dried up, they should be placed on good pasture or given a little grain to put them into a thriving condition before the breeding season. This "flushing" increases the percentage of twin lambs the next year and results in having more of the ewes lamb within the first three weeks after they start.

Fall is the time to cull out all light shearing, poor milking ewes and those which are poor mothers. Ewes that are showing age, as indicated by poor teeth or udder trouble, should be discarded and replaced



A Good Sire

by well developed yearling ewes descended from the best producing ewes in the flock. In the larger flocks, the older ewes must be culled more closely as old ewes will do better in small flocks than in large ones. The ewe flock should be culled on the basis of soundness of teeth and udders and ability to produce market value in lambs and wool, rather than on appearance soon after the lambs are weaned.

The ram should show good mutton conformation, as well as good shearing quality. A ram which is an easy keeper and which will sire early-maturing, market topping lambs should show great width and depth of body, a strong thick-fleshed back, well developed hind quarters,

a deep full chest, a short, blocky head and neck with bold carriage, and a masculine appearance. Good shearing quality, as indicated by the length, density, and covering of wool, is an important requisite of the stock ram. The staple of wool should be at least three and one-half inches long at a year's growth, with a compact surface and with very little skin showing when the wool is parted. The sheep should be well covered on the belly, with the covering extending at least to the eyes and to the knees and hocks. Too much covering on the face is not desirable where sheep are grazed on cut over pasture. The long, coarse, open-fleeced sheep should be avoided.

The use of ram lambs is not recommended, though a small flock of 15 to 25 ewes may be successfully bred to a large, well-matured ram lamb. A good yearling may be depended upon to breed 25 to 40 ewes, and a vigorous mature ram two years old or more is safe to turn with 50 to 60 ewes. An old ram is usually good as long as he is vigorous and active.

The number of ewes that it is possible to breed to one ram will be increased by leaving the ram with the flock only a few hours each day, and then confining him for rest and feed the remainder of the day. Always mark the floor of the ram's chest after the first three weeks and repeat each third day so that he will stamp the paint from his chest on the ewes that are being bred the second time. If a large number are coming back, it is important to secure another ram to replace him at once to insure a crop of lambs. The ewes should be tagged before being turned with the ram. With small flocks, it is always good practice to change rams with a neighbor after the ram has been in three weeks.

The ram should be turned in with the ewes about 146 days before one wants the lambs to begin coming.

FLOCK MANAGEMENT IN WINTER

The ewes should be fed and handled in winter in a manner which will bring them through in condition to give birth to strong lambs and to furnish a plentiful milk supply, but they should be fed as cheaply as possible.

Clover, alfalfa, or other legume hay is the best winter feed, and when legume hay is available very little grain will be required until the last four to six weeks before lambing, when from one-fourth to one-half pound per head of oats, barley, or other grains should be fed daily. When cheaper roughages, such as pea straw, oat straw, or grass hays are used for part of the ration, more grain will be needed, and, if the ewes do not have at least one feed per day of legume hay, some protein concentrate such as linseed oil meal should be fed with the

grain. This may be one-sixth pound of field peas or flax seed, one-eighth pound of linseed oil meal or cotton seed meal, or one-fourth pound of bran fed daily for each ewe. Legume hays are the cheapest source of this essential protein where they can be grown.

LAMBING TIME

Unless grain and good legume hay is available, it is hard to keep up a flow of milk for early lambs. As a rule, more lambs are lost in cold weather, but it may be better in some instances to have the lambs come in April, because, when the rush of spring work starts, little time is available for their care. Less attention is necessary later, because there are fewer difficulties when the ewes lamb on grass, and late May or early June is usually the most profitable time to have the lambs come.

Small, individual pens about four feet square should be on hand to receive the ewe and her lambs upon their arrival. Two small panels hinged together work well for this purpose, as shown in U. S. D. A. Farmers Bulletin No. 810. A small bottle of castor oil should be ready to dose young lambs with a teaspoonful when they show the first signs of constipation. An infant's rectal syringe, ready to use if needed, is likely to save a lamb. U. S. D. A. Farmers Bulletin No. 840 has many useful suggestions regarding the care of young lambs. More than all else, patience to care for and save every lamb possible is needed.

SHEARING TIME

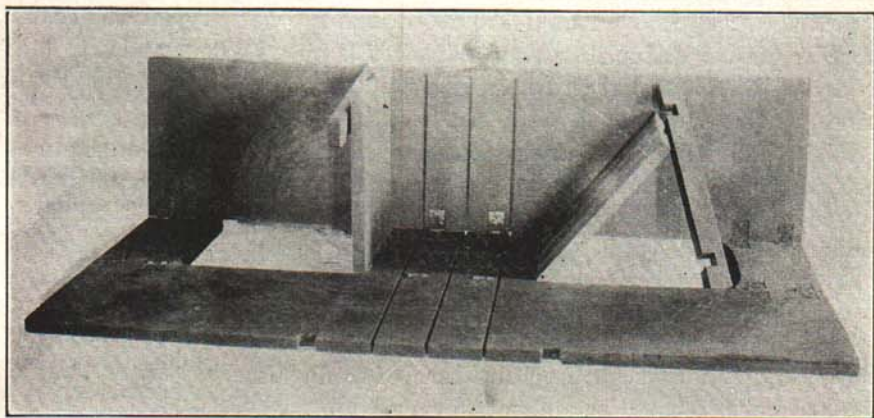
When the ewes can be well protected from cold, there are several advantages in shearing before the lambs begin coming. It gets the wool out of the way and does away with the need of tagging out around the udders, it helps to control ticks, and it avoids the probability that some lambs out of a large flock will be weaned at shearing time. Thin ewes or those exposed to rains and cold for early pasture should not be shorn before the weather is warm, usually late May or early June.

Shearing should be done on a clean floor or canvas, and the sheep should be handled in a way which will keep the fleece clean and not torn apart. The fleece should be rolled by hand or in a wool box, with the skin side out, and the necks, legs, and belly wool inside, and it should be tied with paper twine just compactly enough to hold it in

a neat bundle. Tying fleeces too tightly makes them appear to shrink heavily.

A wool box made after the following plan is a great aid in tying wool neatly.

It is a good plan to weigh each fleece by itself and to mark all the light shearing ewes so they can be culled the next fall. It pays to save ewe lambs from the heavy shearing ewes, provided these same ewes are good mothers and heavy milkers. The quality of the lambs at market time will show the worth of the ewes.



A Wool Box for Tying the Fleece

Bulletins on sheep husbandry which may be obtained by writing to Superintendent of Publications, U. S. D. A., Washington D. C.:—

No.

- 576—Breeds of Sheep for the Farm.
- 798—The Sheep Tick.
- 810—Equipment for Farm Sheep Raising.
- 840—Farm Sheep Raising for Beginners.
- 1155—Diseases of Sheep.
- 1172—Farm Slaughter of Lamb and Mutton.
- 1330—Parasites and Parasitic Diseases.
- 1713—The Sheep Scab.

