The outlook of the sheep industry at the present time is very encouraging to those who have stood by their sheep during the depression of the few years past, and it is such as should serve as an inducement to those farmers who have any room for sheep as part of the farm stock to invest therein.

Supply and Demand.
A few years ago we had 50,000,000 sheep in the United States; today only about 32,000,000, about two-thirds of what we have had, and during that time the consumption of mutton has been increasing until at the present time it takes from 12,000,000 to 14,000,-000 sheep annually to supply the demand which is still increasing at the rate of fifteen to twenty per cent. Had the foolish scare of the American farmer continued a few years longer we would have been obliged to become buyers of foreign mutton as well as foreign wool.

In looking over the market reports for the last few months we find that the best mutton has been topping the meat market, selling close to six cents, while beef is from five to five and a half cents. Judging from these estimates it does not seem probable that the supply of mutton will exceed the demand for some years at least, and the wool having advanced fully thirty per cent., there is profit in sheep farming at the present time, and in my experience there has been no time when the well-fed, well-bred mutton sheep did not show as much profit as any class of farm stock.

While attending the Institute meetings at different places this winter, I have found the sheep men to be few and far between—in some places they could be counted on the fingers of one hand, and that in sections of the state which in my opinion were as well if not better adapted for sheep raising than any other line of farming.
Our State for Sheep.

Wisconsin has some features which should make sheep raising one of the leading industries. We have, as a natural growth, the very best of grasses for sheep, white clover and blue grass, principally, and we can grow on our soils in addition to our grain crops almost all of the feeds which are made use of in feeding and fattening sheep, such as turnips, rutabagas, sugar beets, rape, velches, etc. We have pure water in abundance. We are almost exempt from many diseases of sheep which many states and the foreign countries have to contend with, and we are within a few hours’ ride of one of the principal markets for both mutton and wool.

Advantages of Feeding Sheep.

It seems to me that the system of diversified farming which is generally practiced in Wisconsin cannot profitably be engaged in without some sheep on the farm. We have probably as good as the average of Wisconsin farms, but still there are portions of the farm which would be almost waste land but for sheep—high rolling prairie land with considerable stone and scattering timber—land which would be inconvenient and unprofitable to crop, and the short, thick native grasses which grow thereon are not enough for cattle grazing, but make a fine pasture for sheep, and the timber land furnishes some pickings for the sheep which other stock will not touch, such as brush, weeds, leaves, etc. While we do not confine our sheep to such places, they make their living in part therefrom, and after harvest the stubble fields can be utilized, and if turnips, rape or clover has been sown with the grain in the spring, there will be considerable cheap feed for fall pasturing. As an investment there is no class of farm stock which will give larger and quicker returns than the sheep will if properly fed and cared for. I have known of several instances where well-bred ewes have been bought in the fall of the year, and a year from that date the sales from them in wool and mutton had returned the money paid for them, and enough more to pay for their keep.

The winter care of sheep takes very little time and can be done at a time which will not interfere with the care of other stock. It might also be said of the sheep that they require but very little grain to finish them for market, as compared with the steer or hog, as their growth and gains are made principally off the pastures, and lastly they are said to have a golden hoof, which means in part that but little fertility will ever be sold from the sheep pastures.

The Breed for Wisconsin.

I have been asked many times this winter what breed of sheep I would recommend for Wisconsin farmers. My answer would invariably be that they should be native ewes crossed with a sire of any of the mutton breeds; native, for the reason that they are the product of Wisconsin conditions, climate, feeds and pastures. They are in a way the “survival of the fittest,” and I think the best of our flocks have for the most part been reserved. My experience along this line has been very satisfactory. A number of years ago we had a flock of sheep, from two to three hundred in number, of mixed breeding, a little of everything and not much of anything, but the largest percentage was of merino blood. They were not satisfactory either as mutton or wool producers, and we concluded to change our system and breed for mutton. We culled the flock, reserving about a hundred of the best ewes, selecting as even a flock as we could, seeing that they were healthy, with full mouths, sound udders, and well woolled. Obtaining a sire of one of the mutton breeds, and reserving ewe lambs from that cross, we continued doing so year after year, until at the present time we have a flock of sheep which I think are near-
the equal of the pure breeds of that breed for mutton or wool production.

Breed of Sire.

Then comes the question as to what breed should the sire be. This is a matter of fancy to a great extent, but still I think every farmer should study the history of the different breeds, where they originated, under what conditions, and on what feed or pastures they were developed. Then the bottom lands. I think, if the farmers would pay more attention to this, there would be less complaint about some of the mutton breeds than there is at present.

Selecting the Sire.

In selecting a ram there are several points we must look for. First, he must be a pure bred, for the reason that the lambs got by a pure bred sire will be alike in form, face and fleece,

he would have an idea as to what breed would be most suitable for his farm, as I think all the breeds to be at their best should as nearly as possible have the same care and feed as they have been accustomed to, and he should not let his fancy fly away with his judgment. What I mean is that he should not buy a Lincoln, Cotswold, or Oxford, and expect them to thrive on the thin short pastures of the hillsides, or expect the Southdown to do well on the rank, coarse pastures of and will sell for fifty cents a hundred more than a mixed lot such as the get of a grade ram. I prefer a two year old, for the reason that he has matured at that age, and I know what I am buying; medium sized for the breed, and as even as possible in form. An even excellence is far preferable to size or weight. He should be well covered with wool of an even texture and length. To a certain extent the wool is an indication of the breeding quality. The more
PLANS OF CLOSS BROS. SHEEP BARN.
even the wool the more true he is to type. He should be of strong, vigorous constitution. This can be told to a certain extent by the bold, bright, intelligent eye, the proud, springy carriage, and by the handling.

**Care of the Flock.**

During the summer the flock needs but little care and attention but it is best to take a walk through the pastures every morning, so as to see that everything is all right. There are two things which aside from the pastures I think are indispensable to sheep during the summer, and these are pure water and shade. We furnish them plenty of salt within reach at all times. We formerly used to mix ashes with the salt, but this last summer we have used Sumner's Worm Powders.

About August we wean the lambs, taking them away from the ewes and putting them in pasture that has some green, succulent feed on it. We watch the ewes for a few days to see that they are all right. Then we mark out what we are going to sell, saving for our own use the pick of the flock, putting some label or mark on every individual ewe. After the lambs are weaned, the ewes should be made to gain on fair pasture. This is the best time to have the ewes in good condition, and I think it is as important to have the ewe in strong condition at breeding time, as the ram. After they are bred, we aim to keep them in normal condition; we do not try to make them gain and we do not let them run down. I prefer to do winter feeding in a good sized yard, and I prefer to feed in racks with tight bottoms, so there shall be no waste.

**Feeding the Flock.**

Now, as to feeds. It is not a question of what to feed as much as how. I have fed almost all kinds of feed that is grown on the farm; I like to feed a variety and to feed in rotation, especially the coarse feeds, and not to feed any two feeds alike, even during the day. For instance, feed them hay in the morning, corn fodder at noon and a different kind of hay or straw at night. I would never attempt to winter them without some grain, and I use corn as a grain ration for the first two months, then I withhold the corn gradually and feed bran, oats and peas, until the lambing season. During the lambing season they must have constant care.

As I said before, we turn the lambs into a field with some succulent feed on it; we mark out the wether lambs, the ones we are going to sell, and we begin to feed a little grain, oats and peas—very little at first; gradually increasing. I formerly tried feeding winter lambs, but I found it far cheaper to make the gains on the fall pasture, and sell when we consider we have a fair price, which is generally September or October, and I find no trouble in having lambs up to 80 or 90 pounds at this time—spring lambs. There is another point about these lambs. They should be as even as possible as to size and color, before you offer them for sale. If there are any small lambs in the flock, it will be wise to keep them over and sell them to the butcher. I did that this year, culled them, and sold those of the same size as near as I could make them, and I think I obtained from sixty cents to a dollar more than for the mixed lambs that were sold the same day.

We continue to feed the ewe lambs, keeping in view our object, which is to have them come from grass to dry feed gradually, so there will be no set-back, and we continue feeding them some grain during the winter. We want to get as good growth as possible into those lambs, as they are the future flock. We aim to have them matured at a year and a half.

**DISCUSSION.**

**Question**—When do you prefer to have your lambs come.

Mr. Closs—In March and April, for
several reasons. First, I like to have the ewes bred on pasture and kept up. It is a great mistake to have the ewes come into the yards in poor condition and then come into breeding in low condition.

Mr. Lovejoy—What is the matter with February lambs?

Mr. Closs—They will be all right if they come in in good condition. I have thought that there was some loss, it was too long a time to feed from February.

Mr. Lovejoy—We had seventy-one lambs dropped last week and they were strong as an April or March lamb.

Mr. Closs—I have found it hard to continue the milk flow for two or three months, beginning as early as February, while, beginning in March or April they are soon put on grass and that helps.

Supt. McKerrow—Mr. Lovejoy lives south of here, while Mr. Closs lives a good many miles north; grass comes a good deal earlier with Mr. Lovejoy than it does a hundred and twenty miles north of there.

A Member—Did you ever trouble yourself to raise a lamb on the bottle?

Mr. Closs—Yes, I do quite often, but it is necessary to mix a little common molasses with the milk, if you are going to do it.

Mr. Sayre—Do I understand you that the October and November price is better than the January price for lambs?

Mr. Closs—No, not always, but I claim I get better results for my feed, by feeding on pastures. Of course, I cannot get quite as much weight but the October and November market does not require very heavy lambs.

Mr. Sayre—What did your lambs average last fall?

Mr. Closs—Eighty-five pounds in the latter part of September. The year before it was ninety-five pounds. I sold them for five cents a pound last fall.

A Member—The gentleman says that he fed oats, peas, and bran. What proportion and how much?

Mr. Closs—Well, I sow about a peck of peas to the acre, to nearly two bushels of oats, and of that I feed about a quart a head, I should say.

The Member—We feed sugar beets and like them very much.

Mr. Convey—Mr. Closs, what do your sheep average per head, those you winter over—the profit on sales?

Mr. Closs—I suppose you want to get the exact figures. My sales through the year amounted to $600, and I have twenty more ewes and twenty more young lambs than I had a year ago. I think I wintered over 160 sheep, and I have 200 now.

Supt. McKerrow—What are those 40 sheep worth?

Mr. Closs—I wouldn’t sell them for $200.

Supt. McKerrow—That makes about $800.

Mr. Everett—I wish we might have Mr. Lovejoy’s sheep record.

Mr. Lovejoy—I have no sheep record, particularly. I had a sheep down here at the Institute five years ago last October. I had thirty-five grade ewes, worth $125. I paid $50 for a ram; that is $220. Up to this January 1st, I had sold $973 from that investment and have 150 ewes on hand which are worth five dollars a head today, anywhere. That would make nearly $1,900 for my feed and care.

Mr. Everett—I thought you were a hog man. What are you doing with sheep?

Mr. Lovejoy—There is no reason because a man is a sheep man that he shouldn’t have a little horse sense. I keep them separate.

Mr. Everett—Isn’t it a mistake to allow your sheep to run down in condition just in the fall?

Mr. Lovejoy—Yes, that is the time I aim to make them gain.

Mr. Scott—How do you label or mark your lambs, Mr. Closs?
Mr. Closs—I use the Dana ear tag. It has a number and a name on it.

Mr. Scott—When do you shear?

Mr. Closs—I shear in May.

Mr. Scott—When do you shear, Mr. McKerrow? We want to know what you showman do?

Supt. McKerrow—Some of the showmen have the reputation of shearing in December.

Mr. Briggs—I supposed they sheared the year around.

Supt. McKerrow—I don’t know but we ought to follow up that subject of shearing show sheep. I think that no one makes anything by shearing too early as the sheep do not thrive as well. A good judge knows within a few weeks of when these sheep are shorn, and the extra wool doesn’t cut any figure whatever in gaining the prize. Therefore, if we aim to feed sheep for exhibition for the good of the sheep, as well as for the good of ourselves we should not shear before the first of April, and that is a good time to shear show sheep. We gain nothing by shearing earlier where we have good judges, and we are getting better judges every year in all classes of live stock at our fairs; you cannot deceive those men, though you may deceive the public.

Mr. Scott—Have you any trouble with chronic indigestion, or the sheep running down through scours, in the fall?

Mr. Closs—I have had some, but very little; generally with late lambs. The way I accounted for that was that of late years we have had very dry weather and the grass was dry and indigestible.

Question—How much turnip seed do you sow with your oats?

Mr. Closs—What they generally sow is a pound and a half of rape seed and two ounces of turnip seed.

Mr. Chadwick—I sow a quarter of a pound of turnip seed to the acre with very good results. It furnishes a great amount of feed at very little cost.

Question—are you troubled with ticks, Mr. Closs, and if so, what is your remedy?

Mr. Closs—I dip my lambs about ten days after shearing, in Cooper’s sheep dip. While this is quite satisfactory, at the same time I think it will pay to dip the whole flock before they get into winter quarters. The cost after the first fifty cents is about a cent a head.

The Chairman—is it not a fact that the best quality of mutton requires some root feeding in the winter time, or at least is not the meat improved?

Mr. Closs—I believe it is claimed to be.

Mr. Thorp—Every time you have sold lambs on the Chicago market, haven’t you topped the market or very nearly so?

Mr. Closs—Always.

Supt. McKerrow—that would prove that Wisconsin can raise just as good lambs as any other state.

Mr. Closs—I have no trouble in topping the market with lambs, while there are few Wisconsin cattle that top the market.

Question—are you not able to obtain a better price on lambs by having a carload?

Mr. Closs—No. I have had fifty down in Chicago, and have sold them at the top of the market, just the same.

Supt. McKerrow—it costs a little more to freight them, though.

Mr. Closs—I had ewes to finish up with at that time. I have had good results feeding yearling wethers, far better than feeding lambs.

Mr. Thorp—What do you consider the best mutton sheep in the market?

Mr. Closs—the Southdown is about the best mutton sheep in my experience. I raise the Oxford Down. I prefer them because our land is mostly level, heavy, prairie soil.

Supt. McKerrow—I thought you wouldn’t get Southdowns to eighty-five pounds at that age.
Question—Wouldn’t there be some margin if you should carry those lambs over until they were yearlings and put them on the market when they were, say, eighteen months old?

Mr. Closs—No, I think there is more money in selling them as lambs. You will have considerable of a flock to carry over. Of course, you would have the wool.

Question—Wouldn’t that sheep weigh around 200 pounds?

Mr. Closs—Yes, but it will take considerable feed to make that weight; they would hardly sell for enough to pay for the feed. I had a carload of wethers and lambs and I only got forty cents a hundred difference.

Mr. Convey—It seems to me the question is, which mutton did you produce the cheapest, and which did you get the most money for when you sold it?

Mr. Closs—Up to a year old the mutton is made very cheap, and they are almost matured at a year old. Then after that they will cost so much more. You are feeding right along and not getting much gain. The same is true with lambs as with pork, yes, and steers.

Question—Isn’t it true that the market demands sheep that are early matured?

Mr. Closs—Yes; they demand these mutton sheep; the mutton is of better quality.

Question—How do you sow rape?

Mr. Closs—I sow from three to four pounds. The best crop I ever had I manured the land in May and plowed it up. Then I kept harrowing and dragging it for a couple of weeks, until about the middle of June, when I sowed rape, four pounds to the acre, and it was a big crop. I also sow it after peas.

Question—Is it injurious to sheep to allow them to run on it after it is frozen?

Mr. Closs—I never had any. They ate it up before it was frozen.

Supt. McKerrow—We have fed off rape to the middle of January. Of course I would be careful about letting a flock on, but the first freezings of fall and the thawing out don’t injure rape very much. When I was in Canada last December at the Ontario Agricultural College, I found them feeding rape that had been frozen for three weeks. As soon as the heavy frosts came, they went in with heavy scythes and cut this frozen rape off and piled it in a pile and left it in the field. Every day they sent a team out to bring a load in, and they kept putting it in the sheep and cow and steer feeding barns. They allowed it to thaw out over night and cut it in the morning, after being thawed out, and it appeared about as fresh as it would before it was frozen at all. The farm superintendent and stock manager said they had been doing this for three years, and it was the best and cheapest feed that they could get—better than roots. They sowed rape each year with that end in view.

Question—Can you do in this country as they do over there?

Supt. McKerrow—Yes; we are in the same latitude. They said that one year they had heavy snow and they had to shovel a way to the pile, but they thought it paid even then.

Question—Have you had experience in feeding it to breeding ewes?

Supt. McKerrow—Yes; breeding ewes are the ones that run on it in the wintertime, with me. Of course they had other feed—they only took that as a part ration.

Question—How would you recommend sowing, broadcast or in rows?

Supt. McKerrow—For a late crop for winter feed, I would recommend sowing it broadcast, because you get so much larger yield and you get it so much cheaper, but I would have that land cultivated weekly for four weeks before sowing the crop, so that all the weeds may be killed out and a good seed bed made. Then the crop grows rapidly. We have always had enough
to pay for the trouble, sowing it after barley.

Question—How would it work to sow it in the cornfield after the last cultivation?

Supt. McKerrow—It works very well in most cases. It works very well to sow it from two to five days after you sow your barley or oats. In some cases it works very well to sow it at the same time you sow your barley and oats, but in other cases in a rapidly growing season, with plenty of moisture, it starts your rape and it keeps pace with your oats and barley, and it acts as a weed in your crop; by sowing from three to five days later, the grain gets the start of it, it grows up later above your stubble and makes excellent feed, though not, of course, as good a crop as where you turn the barley land over and put it in as a second crop.

Question—Wouldn’t it be in the way of harvesting your corn?

Supt. McKerrow—I never have seen a crop growing with corn that gave any special trouble in harvesting, though, of course, it was in there six or eight inches high and grew rapidly after taking the corn off.

Question—What kind of soil does it want?

Supt. McKerrow—Any soil that you can grow a good corn crop on will grow rape. The rape plant you might say is like the rutabaga or Swede turnip all gone to top. On rich land I have seen stalks three feet high and full of leaf.

A Member—We sowed ten acres of rye last August, and pastured sheep on it more or less until it froze up. We have practiced that most every fall. Two years ago I sowed five acres of rape—drilled it in, thirty inches apart. It grew to be about three feet high; we cultivated twice. We used two and a half pounds of seed to the acre, Dwarf Essex.

Supt. McKerrow—I would say do not sow anything else but Dwarf Essex, and from two and a half to three pounds is sufficient for broadcast sowing, where you sow rape alone. Where you sow broadcast, it should grow so rank and strong that the sheep will not go into it at all.

A Member—I had a small experience feeding sheep on rye. I had a three acre plat. I sowed it early in the fall and fed it in the spring until the 10th of June. Then I took the sheep off from it and harvested 119 bushels of rye. It offered the last feed in the fall and the first in the spring. We try to make a change, go from one field to another, you can keep them in better condition, changing them all around; then, too, they get more exercise.

Mr. Chadwick—I keep about 500 sheep and I have them run together. I have them on three different pastures and change them frequently. I like it better than keeping them on the one pasture all the while.

The Chairman—What breed of sheep are those?

Mr. Chadwick—Shropshires.

Mr. Sayre—Don’t you ever experience any trouble, having such a large number together?

Mr. Chadwick—I never have had so far, in fifteen years.

Question—Can you keep breeding ewes in the yard all winter and anticipate strong lambs in the spring?

Mr. Closs—Yes, I formerly used to exercise them, but I found it was unnecessary, for with proper feeding they are all right. Of course I feed several times a day so as to keep them moving in the yard, and I have a good-sized yard. It is probably 150 feet one way and 350 feet the other way, and there are 200 sheep in there. Of course, the lambs are confined to a smaller place than the ewes. I keep from forty to fifty in a flock.

Mr. Chadwick—We have one hundred ewes in a yard about 150 feet square and have no trouble, though they were not out of that yard from December 1st.
Mr. Sayre—How many times a day do you feed, Mr. Closs?

Mr. Closs—I feed coarse feed three times, and grain once; the lambs are fed twice, the ewes once. I like to feed the grain about two hours after they get their hay the first thing in the morning. While they are eating the grain, I see that they have plenty of water. In the afternoon I feed corn fodder, which has been planted quite thick and cut with a corn binder and shocked up into large shocks. When it is cured we haul it and stack it up. We run it through the cutter and we feed that in racks with a tight-bottom, and what grain there is in that corn becomes mixed with the cut fodder. I think we have better success and there is practically no waste. We cut it because we can feed it in better shape than by scattering it over the yard.

Question—Do you add any feeding property by cutting?

Mr. Closs—No, I can't say that I do, but I consider that I save considerable.

Question—What do you do for grub in the head?

Mr. Closs—I don't believe in grub in the head.

A Member—Grub in the stomach is the best thing for it.

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BREEDING AND CARE OF SWINE.

GEORGE WYLIE, Leeds, Wis.

It was Artemus Ward who said "Old George Washington's forte was to not have any public man of the present day resemble him to any alarming extent," and it would seem to require a search light turned on the fraternity of breeders at the present time, to discover on whose shoulders the mantle of Thomas Bates or Amos Cruickshank has fallen. While these men were not exactly swine breeders, if it is true that breeders, like poets, are born, not made, no one will doubt but that they could have made as great a success with swine as they achieved with cattle.

At almost every cross-road now-a-days we find a breeder of some kind. It requires no great amount of skill or judgment to breed animals with mere pedigrees, if that is all that is desired, and in too many cases it seems to be the objective point most in view, but the ability to breed ani-