Prest. McKerrow: We have had such a dining hall for eight years in Wisconsin. I guess you never got in there, did you?

Mr. Martin: No, I am not looking for those things. If anybody had informed me what you had in there, I probably would have been in. Do you use it for your judges also?

Prest. McKerrow: Yes, we take our judges and superintendents and assistants and we do a good deal of business there. We haven’t used it very much for guests, although we have sometimes invited in representatives of other State Boards, and government officials. We had to limit it, because the capacity was not sufficient to take in very many, just honorary guests.

Mr. Everett: We ought to build it larger, so as to let Martin in.

Prest. McKerrow: Anything further? If not, we will take a recess until 2 P. M., at which time we will take up the afternoon’s program.

AFTERNOON SESSION 2 P. M.

President McKerrow in the chair.

Prest. McKerrow: You will please be in order.

We are very much pleased this afternoon to see the young men here, some of those who are attending the University. It is not very far in the distance when they will be the old men and they are the men that the state will have to depend upon to carry along this most important line of work that the state rests upon. I was pleased to note that they appeared to have good lungs, which is an essential.

PROFITABLE FARMING IN SOUTHERN WISCONSIN.

R. E. Roberts, Corliss.

The true science of Agriculture is to so manage our land that it will continue to yield bountiful crops without losing its productiveness. At the present time, one of the greatest problems the farmer has to deal with, is building up and maintaining soil
fertility, and all twentieth century farmers should endeavor to leave their estates richer in plant food elements than they were when they commenced to cultivate their farms.

The prosperity of a country or a state, and its power of production, rests upon its soil fertility which is the basis of profitable farming.

Farming has undergone great changes in southern Wisconsin. In the early days grain was sown, harvested and sold from the farm, to that extent that the soil failed to respond longer with any degree of profit.

Then those that had followed this system of farming, if it can be called a system, were compelled to gradually turn their attention to grass and live stock growing in order to build up their soil. At present and for several years past, in many localities in southern Wisconsin; with a large number of farmers the pendulum has swung back from grass and live stock growing to cash-crops, such as tobacco, sugar-beets, cabbage, and other vegetable crops with fair success. Many that grow these cash-crops mentioned and the truck gardeners that raise large crops of vegetables which all requires a fertile soil and a large amount of fertility, usually are located so they can secure the fertility necessary in manures from the city stables and stock yards for their farms to maintain its productiveness.

But those that are located so that they cannot avail themselves of this advantage, must necessarily keep live stock of some kind to convert all the roughage and grains into a finished product in order to maintain the fertility of the land, or it will lead to an impoverished soil as sure as night follows day.

Another erroneous practice pursued by many farmers at present for quick returns are selling at the present high prices their crops of hay and grain, they claiming they can cash more immediate money and easier than feeding the same out upon the farm.

Assuming that the prices for farm products will never reach the low mark of the past; this system continued from year to year will surely impoverish their farms, as no practical or successful system of grain growing can be pursued, unless connected with live stock growing.

Another great hindrance to profitable farming at the present
time, owing to the scarcity of competent farm help, is the attempt to farm too large an acreage, as the farmer's yearly profit cannot always be estimated by the number of acres he tills.

A small farm properly managed and worked, will invariably yield a profit, while a large farm insufficiently worked and grown to weeds, will certainly result in a failure and loss. While a great many large farms are worked very successfully, as a rule many are not.

Now this method cannot long continue, for our land is too valuable to abuse in this hap-hazard manner, and, as land necessarily advances in price to compare with land in other sections, I believe the time is coming and in the near future when these large farms of a half section or more will be divided into smaller farms, possibly eighty acre tracts and the farmers upon these smaller farms will produce as much as is now raised upon a quarter section.

Invariably owing to the lack of proper and thorough work in putting in the crops, cultivating and securing the same, the farmer is rewarded with only half a crop, consequently the largest profits are secured from the smaller or best cultivated farms. Therefore in my opinion to insure success, under existing conditions intensive farming should be practiced rather than extensive.

With this fact in view, those who are diminishing farm values by poor farming or are trying to get all out of the land they can and not return into the soil at least a portion taken from it without a thought of the disastrous result, have committed a great injustice to those who must follow and occupy the land they have impoverished when their brief charge has expired, and also against the prosperity of our great commonwealth. While in a great measure it is their privilege, it is wrong to rob the soil, to diminish its producing capacity, and thus bring hardship upon the following generation.

It is our duty to leave our farms in as fertile state for cultivation as we found them, and in many cases much better.

To accomplish this the farmers must farm more intelligently, not necessarily to use our hands less but our head more, to study the principles that underlie successful farming, as the true farmer, of all business men, must have system, to realize
the most out of every thing, and be able to carry it out by
constantly improving the soil and keeping the land rich, or in
a high state of production.

This can be realized by breeding and keeping a high grade
kind of live stock, as live stock and their products command
high prices; and all indications point to the fact that they will
continue so indefinitely.

With this apparent assurance and from the fact that we have
all the natural resources for the production of high class
dairy products and with our great shipping facilities the pro-
duction of milk upon the farms and shipping the same to the
cities has become a great and remunerative factor in agricul-
ture; combining this with our creameries, cheese factories, con-
denseries and other milk food factories, has been the means of
placing Wisconsin pre-eminently in the front rank in the dairy
industry. Especially the southern part. However as extensive
as this industry has become, there are other important consider-
ations in live stock growing—the subject of meat production.

The great mass of people in our cities will continue to con-
sume meat. They will persist in requiring good beef, mutton,
pork and lard and those that are engaged in this industry have
realized good returns. Prices for all meat products, from various
causes are high and the future holds encouragement for all those
that will engage in this industry. With a good high grade class
of stock for that purpose as no farmer can expect to realize, a
profit from an inferior class of stock, feeding high priced feeds,
upon high priced land, any more than a dairy-man can from a
poor producing cow. As raising low grade inferior class of stock
is similar to poor crops, they will not pay expenses and a profit is
out of consideration.

Therefore I firmly believe that live stock farming of some
kind is by far the best method of securing the largest permanent
returns from the farm.

By growing such crops in rotation as the clovers, the great
soil restorative, with our grains and corn, and feeding the same
out, especially our corn, the entire plant or stalk through the
silo, increasing the value of our corn crop 30% over the old
method and thus realizing the full value from all our crops.
However, where a portion of the grain crop is sold off from
the farm each year we can greatly enhance our fertility by
purchasing concentrated feeds, rich in nitrogen, such as bran,
middlings, oil-meal and other mill feeds, thus replacing the grain crop sold off by this exchange. And by keeping enough live stock of a high grade kind that can profitably consume the farm products, yielding a good profit in animal production and growth of the highest value and the by-product saved and applied upon the land for maintaining its fertility, I believe comes very near pursuing a permanent and profitable system of farming and those that are pursuing this standard of farming are far more prosperous, their farms productive and valuable and they are directly helping to raise this great profession of ours to a higher plane and by so doing are elevating the science of Agriculture, which stands pre-eminent and above all other science (for without Agriculture we would have no use for any other science). Toward that high standard our creator intended it should be, "so he who makes the world better for having lived in it," also his farm more productive by his tillage, has surely not lived in vain.

DISCUSSION.

Prest. McKerrow: Now, this paper is open for discussion, for questions and remarks. The very best part of a program like this is the discussion part of it. We all ought to have some ideas on this subject.

Mr. Stiles: You spoke of live stock raising. What department of live stock do you think would be best for a farmer in your part of the state?

Mr. Roberts: That the farmer would have to determine for himself. Dairying has reached great proportions in Southern Wisconsin. Also there is room for the meat producers, but whichever a man should engage in, whether it be dairying or meat-producing, he wants the best class of stock for that purpose.

Mr. Convey: Tell us what class of stock you are raising and why do you raise it?

Prest. McKerrow: Now, he is up against it and will have to own up to his laziness.

Mr. Roberts: Well, the president says I will have to own up. I am engaged in sheep growing.
Prest. McKerrow: And he is sensible.
Mr. Convey: How about hogs?
Mr. Roberts: They are all right.
Mr. Convey: Why?
Mr. Roberts: Hogs at from 8 to 9 cents a pound on foot and corn at 60 cents a bushel, there is a good margin between the price of corn and hogs on foot, and it is a very paying branch of live stock growing at the present time.
Mr. Scott: Which is the best class of live stock to keep up the fertility of the soil?
Mr. Roberts: They all are good.
Prest. McKerrow: But which is the best, is the question.
Mr. Roberts: Well, I presume that the dairy cow would come near the head.
Mr. Stiles: Wouldn’t that depend on how you sold the products?
Mr. Roberts: Yes, it would, of course.
Mr. Wylie: What is the matter with sheep?
Mr. Roberts: They are all right; if they were not, I would not have them.
A Member: Aren’t they better than cows to keep up the fertility of the land?
Mr. Roberts: I think that the by-product of a herd of dairy cows would be a little more valuable than what you could realize from the number of sheep that you could carry upon your farm.
Mr. Stiles: Wouldn’t that depend largely on what the animals were fed on?
Mr. Roberts: Yes, but sheep manure is richer, adds more to the fertility of the land than that of any other class of animals.
Prest. McKerrow: Isn’t it a fact that a good dairy cow takes out of her feed about 25 per cent of that which would go to enrich the land and puts it into her product, whereas the sheep only takes ten per cent?
Mr. Roberts: I should think they would take out more than 25 per cent.
Mr. Imrie: Mr. President, isn’t there more fertility in the manure from a sheep than from a dairy cow making butter?
Mr. Roberts: The question, which class of live stock pays the best, I would answer in this way: Some farmers claim that upon our high-priced land they cannot afford to keep sheep.
Over in England where land is six times higher than it is here, the farmers there are keeping sheep and making money out of them.

Mr. Scott: And isn’t it a fact that they are selling to our Americans at big prices?

Mr. Roberts: Yes, they sell some. There sheep are largely raised for mutton. Now, some farmers compare sheep and dairy cows in different ways; that is, different farmers. Some say you can keep eight sheep to one cow, while itherers think you cannot keep but five. Now, that is no way to compare them at all. The safest way to compare sheep with dairy cattle is to compare one thousand pounds of sheep with one thousand pounds of cow, and in the proportion that you feed your dairy cow, you will probably feed your sheep in that proportion, and I assure you when you take the labor and the capital involved the sheep will pay as good a profit as the dairy cow.

Mr. Scribner: You think any fool can be a sheep man, do you?

Mr. Roberts: No, sir, I don’t.

Pres. McKerrow: We won’t accept that proposition, will we, Roberts?

Mr. Roberts: Not at all. Any man can sit down and milk, but it takes a smart man to handle a good flock of sheep and raise a good flock of lambs.

Pres. McKerrow: Of course it was a cow man that asked that question. Now, Roberts and I have all the hair left on top of our heads, but this man evidently has rubbed his hair all off against the cow’s flank, to keep her from kicking.

Mr. Convey: Some people are bald outside and others are bald inside.

Pres. McKerrow: This gentleman knows by experience, because he is not bald on the outside.

Mr. Imrie: Mr. Roberts spoke of the high priced land in England and of raising sheep on that. I read a little newspaper clipping about Holland where land is valued from $500 to $2,000 per acre, and farmers pay from $30 to $60 per acre for rental and still they make money feeding and milking cows.

Pres. McKerrow: Roberts won’t own up, but I am going to do it for him; there are some young fellows that like to work so well and so many hours that they are perfectly willing to
meet themselves coming out with the pail full at night when they are going in in the early morning to milk again. Roberts and I don’t belong to that class; we are a little bit too lazy, and therefore we keep sheep.

Mr. Roberts: Sheep are like a good many men, they don’t want to be disturbed in the morning before sunrise.

A Member: What kind of sheep do you think the most profitable for southern Wisconsin?

Mr. Roberts: I don’t like to get into any trouble here in regard to breeds, but I will say this much, that our blackfaced breeds of sheep command the highest price upon the market for this reason, their meat is nicely marbled and they are mostly sought for by the buyer.

A Member: You think then that a mutton breed would do better than a wool breed?

Mr. Roberts: Yes, mutton should be the first consideration.

Mr. Stiles: As a sheep breeder, what would be your choice of breeds; in other words, what kind of sheep do you raise?

Mr. Roberts: I said I didn’t want to get into any trouble in regard to breed, but I raise Shropshires myself; it is a matter of taste, however; you may take any of the blackfaced breeds of sheep, and if it is a breed that will meet your fancy, you will do the best with it, from Hampshire-down to Oxfordshire-down. Those breeds are very popular.

Mr. Scott: How would it be about goats?

Mr. Roberts: Well, up in your Northern Wisconsin on cut-over land, a man perhaps could put some goats there profitably, but as there is no market established for mohair here, I can’t see any advantage, only that they might clear up that land a little better than a flock of sheep would.

Pres. McKerrow: This question reminds me of a question asked at a Farmers’ Institute a few years ago by a gentleman in the audience. I noticed a squarely built, bright looking German farmer begin to shake his head the minute the question was asked, and then he broke out, and he says, “Ouf, we want no goat. He is the devil. Where you want him there he isn’t, and where you don’t want him there he is.”

Mr. Roberts: There is a good deal in that.

A Member: Do you think it is advisable on a small farm to engage in sheep raising and dairying combined?
Mr. Roberts: Yes, a farmer can keep a few sheep on a small farm in connection with his dairy. Of course he can’t go into it very heavily, owing to the fact that the sheep will do well, but the dairy cow won’t do quite as well if there are too many sheep, as the sheep crop more closely. But he will carry a few upon his farm and he will not miss what they will consume each year, and the farm will be a good deal cleaner.

Mr. Scribner: If you follow up that theory with the milk sheet, I think you will find that it is not so. A man who keeps a milk sheet in his barn wouldn’t make that statement, I am sure.

Mr. Roberts: At any rate, the produce from the lambs will be like finding money. I realize his dairy cows won’t do so well if the sheep crop very closely.

Mr. Jacobs: Shouldn’t we keep them in separate pasture, anyway?

Mr. Roberts: Certainly. That is the system I have followed, the sheep and cattle do not run together.

Mr. Jacobs: Do you think it is advisable for the farmer we have been talking about to sell some cash crops off his farm?

Mr. Roberts: If the man has the farm under a very high state of cultivation he can grow some small amount of cash crops and not interfere with his rotation. If the cash crop is successful, he is that much ahead, and if it is a failure he doesn’t miss it. Of course, if he grows these cash crops to an excess, he is going to upset things to some extent and suffer from it, he will certainly impoverish his farm.

Mr. Jacobs: Doesn’t he impoverish it to the extent of the cash crop that is taken off the farm?

Mr. Roberts: Yes, certainly; but if he is feeding rightly and buying back concentrated feeds with this cash, feeds that he does not raise, he can keep up the fertility of the farm.

Prest. McKerrow: Then it will be a question whether this cash crop will give him can income over and above the concentrates that he has to buy to keep up the land.

Mr. Convey: Do you think it is necessary to buy commercial fertilizers?

Mr. Roberts: I don’t think it is necessary to use commercial fertilizers. Many of those who are growing these cash crops do, in a measure. It helps to liberate the fertility in the soil, but these commercial fertilizers only act as a stimulant to the
plant for that season. It does not add humus to the soil, which we exhaust quicker than anything else, and I say that the farmer in Southern Wisconsin, or any other portion, or any other state, ought to feed out all the product there is upon the farm and not depend upon commercial fertilizers.

Mr. Utter: If you think it is proper to buy concentrated feeds to feed your animal and you have good market conditions and grow these cash crops which are highly profitable, couldn’t you afford to pay for plant food to feed your crops as well as you can afford to buy concentrated feeds to feed your animals?

Mr. Roberts: I said that many who are growing these cash crops, truck farmers and others, are buying commercial fertilizers, because it helps set free the fertility in the soil, and it does pay them, but the farmer cannot depend on these commercial fertilizers; it does not add any humus to the soil and we must have our soil filled with this matter.

Mr. Utter: Shouldn’t they really buy plant food to feed the plant as much as to buy concentrated feed to feed the animal? You are not buying food to feed the animal which releases some property in the animal?

Mr. Roberts: I said it did stimulate the plant and help it.

Mr. Utter: But you are just as truly feeding your plant by buying plant food as you are feeding your animals?

Mr. Roberts: Yes, that is true.

Mr. Utter: So I don’t like to have you make that distinction between stimulation and feeding. I want you to make this right on the record.

Mr. Scott: Mr. Roberts simply misspoke himself, he thinks the fertilizer feeds the plant.

Mr. Roberts: Yes, but only for that year, and it does not add any humus to the soil.

Prest. McKerrow: And Mr. Roberts made this very important point, that you have to have well bred and profitable stock to feed the concentrated food to; therefore, it is a question whether you have the right kind of a plant to feed the fertilizers to.

Mr. Scott: But can’t you, by feeding the animal these concentrated foods, feed the plant also, and at the same time increase the humus contents of the soil?

Mr. Roberts: I certainly think so.
Prest. McKerrow: Feed the soil through the animal and get two profits; that is where he is ahead of the fertilizer man.

Mr. Utter: He had made the statement that he did not think he could afford to buy concentrates for the land, and I made the point that where the markets are good, it is just as profitable to feed the plant as to feed the animal. He thinks more of the animal than he does of the plant, because he is a live stock man.

Mr. Roberts: That is my case, but there are a great many others—take it along the lake shore near our city. They are growing cash crops at great expense, they have to depend upon buying all their fertilizers. They will buy these stable manures and stock yards manures as far as they can and those are the men that are largely using these commercial fertilizers.

Mr. Stiles: Don’t you think we can increase the fertility of our farms under the rotation system more by feeding out all we raise to dairy cows and feeding the by-products to the hogs than in any other way? I believe it anyway.

A Member: What is the nature of your soil, Mr. Roberts?

Mr. Roberts: Mine is black prairie soil.

Mr. Jacobs: This term “increasing the fertility,” might be misleading. While it might be possible to increase the nitrogen in the soil, I don’t see how you can increase the potash and phosphates.

Mr. Stiles: The available fertility it what we really mean.

Mr. Utter: I understand Mr. Stiles means without buying concentrates. Now, according to the very best authorities, it is claimed that a rotation of crops does impoverish the soil; while it makes available the plant food in the soil for the present, that is one method of making available the fertility of the soil, but you haven’t added anything to the soil and you are constantly taking something out of it, and unless you replace it in some way, you are depleting the quality of that soil.

Prest. McKerrow: The gentleman made the point of feeding the live stock everything grown upon the farm under the rotation of crops.

Mr. Utter: You are impoverishing your soil if you do not buy feeds. You are not adding anything to the farm and you are taking off something, and when you are taking off something you are depleting the quality of your soil. You cannot
run through a series of years, keep your farm up, without adding something from the outside. In that I think I am sustained by the very best authorities.

Mr. Scott: We are taught by the chemists that in every ton of wheat bran that we purchase from the Minnesota mills, we bring to our farms nearly sixty pounds of phosphoric acid and quite a large tonnage of potash and the manure made from this bran of course contains these elements in a largely available condition. I don’t see why it is not just as well to buy potash and phosphates in the form of concentrated feeds for the animal as in the form of concentrated fertilizers for our soil. I think I fully realize the importance of keeping up our soils in a good state of fertility, but sometimes I think we might as wellstarve to death as be scared to death.

Now, Prof. King has been over to China studying up this question of fertility and he finds upon soils which have been farmed for possibly 5,000 years, upon bringing samples of these soils back here and analyzing them, that there is still sufficient fertility, mostly in a potential form to be sure, which, if rendered available would bear profitable crops for 5,000 years longer.

Prest. Mckerrow: So you need not be scared to death for a while yet, you and I won’t be here that long.

Mr. Hill: I just want to disagree with my friend Utter. He says the fertility could not possibly be maintained. Possibly it could not be, if you are going to figure down to a very small decimal, but I think that if you fed out everything that you raise on the farm and sold nothing but butter, you would be actually adding, especially if you raised clover, that not only the available fertility but the total fertility of the farm would be increased.

Mr. Utter: That is a fair statement.

Mr. Hill: I want to add one word about commercial fertilizers. I made two trips recently to the island of Guernsey where land is worth from $1,000 to $2,000 per acre and rents from $50 to $100 per year, and I suppose those farmers have found out by experience that they cannot depend upon commercial fertilizers; at any rate, it is a fact that they use very little, in the way of commercial fertilizers in that very intensive farming, mostly under glass, and it was very poor land to begin with.
Mr Utter: I rise in this audience as a Wisconsin farmer, not as a commercial fertilizer man, but the who'e trend of thought now all over the United States is for better crops and, as we used to say in the Farmers' Institute, it is not how many acres, but how much per acre. The time has come when we have got to grow more per acre and every system that will bring us around to the point where we will grow larger crops is to be studied.

I do not think there is anything that has attracted more attention than those articles written by James Hill. He seems to have the confidence of all the people both in the cities and in the country; his word is listened to as that of a practical business man. I don’t think that anybody should be satisfied with his crops as they are growing. I find that the men who are growing the largest crops are the least satisfied. It is a matter of study at this time how best to manage your land and I do not think you can study too much along these lines.

I know there is a prejudice in this state, has been, and Dean Henry was one of the men that caused the prejudice, against buying commercial fertilizers, and, in a way, it is right. I believe in the rotation of crops as much as Mr. Stiles, and I will follow it, always have done so in my farming, but on coming to a point that I cannot even buy Stock Yards manure to the extent which is necessary, I find it necessary to study fertility, and I am spending a few months in the winter with the nitrate of soda propaganda, and our Government is publishing the best knowledge along that line of the best methods of agriculture.

This country has reached a point that many foreign countries have passed. Fifteen years ago Germany went through the same experience we are going through now; on many of their farms the soil had been exhausted and they were not yielding profitably, but through their newer methods of cultivation they have brought up those farms in Germany and to-day they are growing two hundred bushels of potatoes on the average to the acre, while we are growing one hundred, which has been largely brought about by better fertilization, and I think this question should be discussed fairly.

Prest. McKerrow: 'For want of time we will have to close this discussion and take up the next sub-topic.