A. I never had any trouble when the sheep were running in the pasture at the time.

Mr. McKerrow: It will pay you a good deal better to keep your flocks off from frozen clover and feed something else, even if you have to buy the other feed.

Mr. Dixon: My own clover is usually cropped down so close there is not much danger of freezing.

Discussion closed.

Mr. McKerrow: The next subject is one that is being discussed a good deal, pro and con, and there is a great diversity of opinion with reference to it,—"Modern Views of Bovine Tuberculosis," by Dr. H. P. Clute.

MODERN IDEAS OF TUBERCULOSIS.

BY DR. H. P. CLUTE.

Mr. Chairman and Gentlemen:

When your secretary, Mr. True, requested me to address you on Modern Views of Tuberculosis, I supposed he meant from a professional standpoint. As there are so many views presented to the public through certain agricultural papers, that are non-professional, and from parties that have had no experience whatever with the disease or tuberculin test for same or have arrived at a conclusion from reading articles from such sources as mentioned; or carry the idea that, because they never had tuberculosis in their family or their own herd of cattle, that such a disease does not exist to any extent. I very frequently have filed copies of the Breeders' Gazette dug up and shown me through the country to prove some insane idea about tuberculosis or the tuberculin test. It gives me pleasure to have this opportunity to present my views to you on this subject. All skeptical parties are very easily convinced after they have once
watched a tuberculin test on a herd where there was known infection, and the subsequent post-mortems of the reacting animals, with the exception of one man, Dr. Rodermund, of smallpox fame. He admitted the animals were diseased, but thought the rest of the herd ought to be slaughtered to convince him that they were not in the same condition; although he had seen pus enough, had he been in a smearing business that day, to cover him from head to foot, in which condition he would look well in an antiseptic glass case placed in some remote corner of a dime museum. Gentlemen, there are too many Rodermunds in regard to the contagion of tuberculosis.

I will give you a synopsis of my experience with the disease, and the tuberculin test. Tuberculosis is an infectious disease caused by the bacillus tuberculosis, which was discovered by Professor Koch in the year 1882. Up to that time, the disease was thought by a majority of the medical profession to be hereditary in most cases. As soon as the bacillus was isolated it gave a field for experiments which have proven the disease to be contagious in the larger percentage of cases.

It was through Professor Koch's experiments with Koch's lymph, or the bacillus of tuberculosis neutralized, that the veterinary profession came in possession of the tuberculin test as a diagnostic agent for tuberculosis, by its causing a rise of temperature in the patient being affected with the disease, and no rise or change of temperature in those not affected.

Tuberculin is prepared by first injecting the bacillus in a horse and in twenty-one days drawing off a small quantity of blood, which at that time contains the bacillus in a mild state. On the same principle that diphtheria antitoxin is prepared, or the virus of smallpox is passed through the bovine species to make vaccine to guard against smallpox, only in the latter case the scabs from the pustules are taken.

To doubt the practicability of the tuberculin test at the present time is, I think, analogous to doubt vaccination against smallpox as being a success.

In applying the tuberculin test you must be very careful to keep the animal as near a normal state as possible, for the bo-
vined species are very susceptible to a high temperature from excitement, change of food, driving a few miles in warm weather, or from very hot weather; in the latter I have seen the temperature in many cases run up to 105° F. The normal temperature ranges from 100° to 102°, according to the kind of food the animal is receiving. A steer being fattened on corn, or a cow being forced for the milk product, often runs 102° at normal. It is not practicable to apply the tuberculin test in hot weather, as the temperature is liable to run up in the middle of the day enough to bring the animal inside of the limit of 2 degrees, which I condemn on, while many claim one degree and a half is sufficient. I had much rather keep a suspected animal not rising the required 2 degrees, and re-test at a future date. I am satisfied that the tuberculin test, when carried out properly is infallible. I apply the test by taking the temperature morning, noon and evening, to get the normal temperature. If I find all animals normal and none of them in heat, so as to give any other cause for a rise of temperature the next day, I inject tuberculin at 8 P. M., and begin to take the temperatures at 6 A. M. next morning, taking the temperature every three hours. You will generally find the temperature of an affected animal is the highest at from 13 to 16 hours after injection, and generally it will begin to recede at 21 hours; therefore it is not necessary to take any more readings of the thermometer, only in occasional cases where there is a gradual rise up to that time. The affected animals during the forenoon may have a chill, shiver, eyes staring, and if the thoracic cavity is affected or the adjacent glands, the animal generally coughs a good deal more than usual while undergoing the test.

The animals not affected do not evince any change whatever. It is not uncommon for an animal affected to run up 5 and 6 degrees. The animals in the incipient stages of the disease react the highest; the ones permeated with the disease show the least reaction. I find by giving larger doses than is ordinarily prescribed to chronic cases, they will react stronger. I have, in various parts of this state, post mortem 278 head of cattle of all breeds and ages. In every case where the animal reacted
2 degrees, barring one, I have had no trouble to find the disease. I have held post mortems in every case where there has been a part of a herd affected, to satisfy the owner, for in many cases it would hardly be believed that the animals were diseased until it is shown on the post mortem. An expert would not be able to tell in those cases, without the aid of the tuberculin test; thus the animal may be in condition to throw off the bacillus and spread the contagion long before the owner notices that the animal is sick. This of course necessitates the slaughter of animals in the incipient stage of the disease or the isolation of same from those not reacting.

The older the dairy country, the more prevalent we find the disease. It is more widely disseminated in the southern part of the state, which rule follows the same as the larger percentage in foreign countries where dairying has been carried on extensively, and also in the eastern states. In Denmark, when they began to try to eradicate tuberculosis, the test showed 40 per cent. of the cattle to be affected. In Massachusetts, about 18 per cent., and so on down. In Wisconsin we are not so badly off, our percentage being about 7.29 per cent. affected. Out of 586 head tested, where there was known infection, 210 animals reacted to the test, which I have slaughtered and post mortem. Out of 3,223 tested where there was no known infection, 68 reacted. The cattle tested where there was no known infection, were in state herds and stock for shipment, the larger percentage being picked milk cows for shipment to Illinois, and were from all parts of the state. Total tested, 3,809; reacted, 278. The cattle where there was no known infection being nearly six times greater than where the infection was known to be present, it is fair to presume that 7.29 per cent. is as close an estimate as we can arrive at, at the present time.

Gentlemen, while this percentage is not large, it is too large to countenance without using the most strenuous measures to prevent the spread of the contagion. The contagion of bovine tuberculosis spreads so slowly, still surely. It is hardly noticeable until the breeder or dairyman has a body infected herd. It certainly is too large for breeders to form associations against
the eradication or reduction of same as much as possible, as has been done by the Shorthorn breeders of Iowa,—or, equivalent to the same, an anti-tuberculin association. It is as preposterous as forming an association against vaccination to stop the spread of smallpox.

When you contract to buy an animal for breeding purposes and the owner will not submit to have the tuberculin test applied, rest assured the owner is afraid the animal may be affected and does not want to run the risk of having it known. Such an animal is dangerous to take into your herd; in fact, if breeders will make it a rule not to take a strange animal into their healthy herds without submitting it to the tuberculin test, they have done a great deal toward the suppression of the spread of the contagion. A great many breeders and dairymen have suffered large losses in this state by bringing an infected animal into their herds. The Clapp herd of Guernseys, which was dispersed, carried the infection into over twenty herds as far as known.

There has been much said about the susceptibility of different breeds of cattle to contract the disease. I do not think there is any difference in regard to the different breeds if they are subjected to the same conditions and the same source of the contagion. Cattle that are housed most of the time with one that is affected will more readily contract the disease, as the bacillus in the pus raised from the lungs will readily dry and be disseminated and taken through the air passages or food; while on the other hand, light or heat or severe cold will render the bacillus inert.

You are very apt to find the animals reacting on both sides of one badly affected with pulmonary tuberculosis, for from two to three animals each way, if the animal is stanchioned near the middle of the row, and in many cases no other reacting animals in a herd of 40 or 50. The proudest breeders in the state today are the ones that have had their herds tested and the diseased ones disposed of, and well they may be. They can sell an animal for breeding purposes to a neighbor and feel that they are not endangering the herd of same to the contagion; or a milch
cow, or milk, or the product of their dairy, without feeling they are endangering the lives of any family. There is no question but the contagion is carried by the milk and is also communicable from bovine to man and man to bovine.

In one cow that had an affected udder, that I post mortemned, with two of her calves, one eight months old and one a year and a half, I found both calves badly affected along the abdominal viscera and one in the glands of the thoracic cavity and one lung. They had all reacted to the tuberculin test. It is not absolutely necessary to slaughter an animal in the incipient stage of the disease, but as you can never tell at what time they arrive at the point of spreading the contagion, I think it is better in most cases to dispose of them at once.

It has been proven in Denmark and followed up in this country that healthy calves can be raised from tuberculous cows. This is called the Danish method. It is carried out by taking the calf from the cow as soon as dropped, isolating the cow and sterilizing the milk from same to feed the calf. You can readily see that this is very expensive, as you have to keep a cow for at least a year or more to get the calf, with no other remuneration coming from same except the calf. I would recommend this, as being practicable, only where you want to preserve a strain of stock that you cannot in your estimation replace, or in case of very valuable animals.

I find one objection that some breeders of blooded cattle have to the tuberculin test, that is, that they are afraid that if any animal would react, it would be scattered abroad that they have infected animals in their herds and thereby hurt the sale of their stock. The result of a test should have directly the opposite effect, as after their herds have been tested, infected ones removed, that is evidence that their cattle are healthy and certainly worth more to any man for breeding or milk purposes. The stock raisers that grow blooded stock ought to be the first to create the latter impression; while, on the other hand, many are going directly the opposite, and the contagion goes on. I do not believe in going at it in too radical a way, the way they have done in some of the eastern states,—not but what I think
that they were right in trying to eradicate the disease, but they
defeated the ends that they aimed at in many cases, simply be-
cause the breeders and dairymen had not thoroughly looked
into the matter themselves and they thought they were being
persecuted. I believe that when they thoroughly look into the
matter and see that it is for their own interest, and more thor-
oughly understand the disease, that they will be the first peo-
ple to help suppress it. It has been my whole aim since I have
held the present office to do as much to enlighten the cattle in-
terests on this subject as possible, and think that I have done
more to do so by the post mortems I have held of reacting an-
imals than any other way.

. Gentlemen, your seeing a thing is not reading what some one
else has seen, or in many cases probably has written about and
not seen. I find some people that don’t care to see; they are
the ones that do the most talking against the tuberculin test and
the presence of tuberculosis. A case of this kind occurred the
other day at Fond du Lac, where I held post mortems at a slaugh-
ter house on nineteen head of cattle that reacted to the tuber-
culin test. These came out of three different herds; eleven
were thoroughbred Shorthorns. A gentleman who had known
of the cattle for some time and knew that two in one herd had
died of the disease in the previous six months, said: “You have
got cattle in that bunch that there is nothing wrong with.” I
asked him if he had had any experience with the test; he said,
“No.” I then asked him to come and see the post mortems,
and convince himself as to whether the test was right or wrong.
He said that he would not, that he didn’t believe in it, that I
might just as well slaughter his cattle as the ones in question.
It put me in mind of a story of an Irishman who stole a dressed
hog and was arrested for the theft. He went to a friend of
his, an attorney, to solicit his aid in defending him. The attor-
ney says: “Pat, did you steal that hog?” “By gorry, I did”
said Pat, “but they can’t prove it.” “Then, Pat, you cut that
hog in half and bring one-half over tonight and put it in my
cellar, and I will try to clear you in court tomorrow.” Pat’s
attorney, on making his plea to the jury, elaborated a great deal
on Pat's good qualities, told the jurors they had all been raised with him, and they knew him very well and knew well that he would not steal anything, and wound up by saying: "Gentlemen, do you think I would steal a hog? I will tell you, gentlemen, upon my honor, Pat has no more of that hog than I have." Pat was acquitted.

Now, gentlemen, I think I have given you as general an idea in a condensed form of tuberculosis in this state as is possible for me to do in the length of time allotted to me. Thanking you very kindly for your attention, I will close.

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DISCUSSION.

Q. Could a layman apply the tuberculin test?

Dr. Clute: I think it could be applied, but a person not familiar with the thermometer might possibly make some mistakes.

Q. Would it always react?

Dr. Clute: In chronic cases it reacts very slightly, if at all.

Prof. Henry: Every student in the short course in agriculture is taught to apply the tuberculin test, so at least 100 students of the second year class go out each year understanding the application of the test. Our students are going back to the farms and testing their own herds and sometimes testing the herds of their neighbors. One student went home two years ago, thinking that his own herd of cattle was all right. He applied the test and found twenty diseased animals! There are a great many farmers who think their herds are all right when such is not the case. Our state veterinarian has been very wise in the way he has gone about this important matter. I wish to thank him for this paper today, and for the way he has prosecuted the work and the reasonableness with which he has presented his case. In Massachusetts a few years ago this subject was brought before the people in such a light that they were badly scared. They secured a legislative appropriation and
killed thousands of animals, and that state paid out over $600,000 in three years in an effort to stamp out tuberculosis among cattle. The effort was not successful because the people had gone at it foolishly and the expense was such that the commonwealth could not bear the burden. Our state veterinarian and the Wisconsin agricultural college, through our Dr. H. L. Russell, have been working unitedly and energetically to teach people the dangers of this disease. If we go at it seriously and sensibly, we can eradicate this dread tuberculosis from our state. I hope Wisconsin will not take the stand taken in some states,—shut our eyes and say there is no such condition existing. Fortunately, Wisconsin breeders are taking the other view. If the directions which the Doctor sets forth are followed by our people we will proceed in a sensible way. If everybody will look to the health of his own stock, there will be no need of the state spending hundreds of thousands of dollars in the wasteful way some others have done.

Q. Does an animal with a well developed case lay on flesh?
Dr. Clute: No, not ordinarily. They may stay in good condition and be quite well developed in the disease, but will begin to run down as the disease advances.

Q. Ordinarily, how long from the incipient stage would it take to develop the disease?
Dr. Clute: From eight months to three or four years, according to the condition of the animal and the conditions it is subjected to. Anything that will debilitate the animal will give the disease a good chance to work.

Mr. Cogswell: With an animal in that condition in the herd, the other conditions being sanitary, all favorable, would it not be possible and probable that the herd would remain healthy even while that animal might go to its death?

Dr. Clute: No, not in tuberculosis.

Mr. McEwen: I might give a little testimony. I had a cow affected with this disease and she died from it. I had a veterinarian come and we had a post mortem. He declared it to be the genuine article. I notified through the health board the Doctor here, who happened to be in town. He said it did
not require any test. It was a case without a test. His assistant came and tested the herd and I got a clean bill. (By the way, that cow died before he got around.) But I had my doubts about that test. Several cows had had affected udders. One had come to ulceration. I made up my mind that I would have a little test of my own, so I had the veterinarian up from Janesville. We found that she was not affected in any way with tuberculosis. It showed that those that had been tested were free from it, as had been declared by the state veterinarian.

Dr. Hartwig: How long after the first test were they re-tested.

Mr. McEwen: They were not re-tested, except in one case. I dislike to tell about that case. A little of my own foolishness crops out there. A fellow came along selling stock food. He happened to be a friend of mine. I bought some and thought I would put the matter to a test. I had two fine young heifers that had just calved and I commenced feeding the stock food according to directions. They failed to come up to their feed in a short time. One of those cows acted as though it had tuberculosis. I said to myself I was not going to have any more advertising in the county papers, so I tested the matter myself and found she was perfectly free. The lining of the stomachs and the walls outside of the lining were congested.

Mr. McKerrow: After eating the stock food? A. Yes.

Q. Did you make a second test? A. No.

Dr. Hartwig: Do you think a man not thoroughly familiar with pathological laws is fit to make a post mortem examination, except in the advanced stages?

Dr. Clute: Not in the incipient stage. If the pus in the tubercle is large enough and granular, I think a man who has seen port mortems can tell it. There are cases where you have to go through the visera to find it.

Dr. Hartwig: Do you think a man can properly apply a tuberculin test unless he is familiar with the test given to a domestic animal?

Dr. Clute: I think a man might, so far as understanding injecting the tuberculin and reading the thermometer is concerned,
there are conditions where a man is liable to make a great mistake, when other things come up to cause a rise of temperature. One might make a mistake in that way.

Q. How soon can you give a second test?

A. Not inside of six months at least. I have known cases where animals would not react in four months and still be affected with the disease. This causes considerable trouble. If a person injects tuberculin in a herd of cattle two or three days before calling in a man to make a qualified test, it will fail, because it won’t react. I know of a case where it was done with cattle for shipment into Illinois. The cattle will not react inside of sixty to ninety days, and sometimes longer. It is a good deal like vaccination.

Q. What is the proper amount to inject in a calf from three to six months old?

Dr. Clute: It depends upon which way it is prepared. If it is Park–Davis’s preparation, about one-half a gram for a calf of that size, when diluted. Of the pure, one cubic centimeter.

Mr. Faville: Do animals ever recover from it? You make a test and they respond to it, and at some future time are they sound?

Dr. Clute: Never.

Dr. Hartwig: In regard to Professor Henry’s statement that the average student, or all students going out from the agricultural college, will be the persons to apply the tuberculin test, I do not doubt that, but I believe that they can be tripped very often, I have very nearly been tripped myself. I was a student in 1889. I ran against a herd three or four months ago, and the first case that showed any signs of tuberculosis was a Guernsey bull. This bull was nine months old. The owner had had several people look at him. They said he was free because he was in fair flesh. I was called to test the animal, and when I injected the tuberculin it did not react. When I got through the owner asked me what I thought. I said the animal had tuberculosis. He asked why he did not react. I said I thought he had gone so far he could not react. He said go ahead and kill the animal if I thought that was so. We
killed him and we found he had genuine tuberculosis, both pulmonary and of the alimentary tract. I would like to know what the average agricultural student could do if he did not have the proper knowledge, taking all the points into consideration.

Mr. Hill: Our own herd was tested in 1894. I am inclined to think that it was the first herd of pure bred cattle in the state subjected to the test. Dr. Clute spoke in his paper of there being thousands who would fear to buy from the herd if it were known. This subject is bound to work out its own salvation along these lines through the increased proportion of the buyers demanding the test for the sake of the immunity of their own herds.

Dr. Clute: I would like to hear from somebody in the state besides the gentleman from Rock in regard to the test. I have failed to find a man for whom I have held post mortems who has not been thoroughly convinced and as set against the disease as possible. This was the case with that herd at Fond du Lac. The man there had one of the finest Durham bulls that I have ever seen, weighing close to 1,700. He said that this animal reacted and that he would rather lose the whole herd than lose that bull. When we made a post mortem examination we found a very large tubercle in the liver and one the size of an apple between the lungs. It was only a matter of six or eight months that he would begin to go down in his condition. There happened to be one of the short-course students there. He looked the stock over and said: "I have no doubt whatever but this animal is affected, but I would advise you to keep him." Yet there was no question but that that animal in five or six months would be in such a condition as to throw off the disease.

Mr. McKerrow: Dr. Hartwig raised the question, Prof. Henry, about a Guernsey bull that did not respond to tests, and he decided that he was so far gone that he could not respond. Would the average short-course student be able to diagnose a case like this?

Prof. Henry: I do not think that the average short-course student is as wise in veterinary matters as the average veterinarian. But until veterinarians themselves make no mistakes I
think the same thing will occur with the short-course students. I think the short-course boy can go home and watch his herd better after the instruction he has been given at our college than he otherwise could. I would be the last one to advertise our boys as veterinarians, but they can do this work in many cases wisely and well. They know more about it than though they had never seen animals in that condition. I think our boys will be the best employers of veterinarians of any class of people. I do think it is possible for a carefully trained person to test his own animals for tuberculosis and draw correct conclusions from the reactions secured.

Dr. Leach: I do not think there is any question in the minds of veterinary surgeons as to reading the thermometer and injecting the tuberculin, but this matter does not stop there. All over the state of Wisconsin the same complaint comes, from not only butchers, but slaughter-house men in the cities. When a veterinarian of the state of Wisconsin tests those cattle they are sent where they should be sent in order to stop this disease and stop loss to the individual who has purchased those cattle. The state pays two-thirds of the valuation of these cattle and the owners are reimbursed, and only in that manner. When they are tested by the short-course student they are never reported to the state veterinarian nor to any source whereby the disease is stopped, but they are often sent to the slaughter-house and either the community has to consume that meat or else the larger butchers have to stand the loss themselves, and that complaint is coming continuously from these sources,—why it cannot be stopped,—and the question is whether the short-course students shall report their herd test to the state veterinarian and have that animal reach the assessor, or turned over to the butchers and have somebody suffer for that loss.

Dr. Smith: The tuberculin test is a dangerous thing in the hands of the short-course student. We have found from experience where herds were affected and short-course students have gone and applied tests. These animals were kept in that community for some time,—about six weeks or so and then they called in a veterinary to make a test. After you test those ani-
mals you cannot get a re-action again for ninety days. The veterinary gets the blame and the short-course students gets the benefit. In the course of a year or two you will find that two-thirds of the herd is affected, and I consider it dangerous medicine for any student who is not qualified to make the test. I think they were honest enough about making their statement that the animals were not diseased.

Mr. McKerrow: Is it not possible for a veterinarian to make these mistakes?

Dr. Smith: These are cases that come under our notice frequently. A man who knows a little is worse off than a man who knows nothing.

Dr. Hartwig: We do not question the ability of a short-course student to inject the tuberculin and read the thermometer. There is no question about that. They are better equipped to do that than the farmer or stockmen. When the short course students go wrong they are not all of them honest enough to report it, and that is where the veterinarian gets it when the cases do not re-act.

Prof. Henry: Now there are several ways of handling diseased animals. Suppose, for instance, that a man has 20 thoroughbred Shorthorns. Ten re-act. The man may not wish to kill them. He tests them himself or has a veterinarian do so. He can keep those ten diseased animals and use them for breeding stock, isolating them from the rest of the herd. One of our students has done that and he has carried on his work satisfactorily. He has kept his diseased cattle separated from the well ones. In that way he has been able to preserve the progeny of his valuable diseased animals while not endangering those not having the disease. A farmer in this state put his well animals on one side of the barn and the diseased ones on the other side and removed the calves dropped by diseased cows to the well side as soon as they were born. After this dairyman had kept the whole herd,—sick and well, for some time he had so many healthy animals that he concluded to dispose of all the diseased ones. We bought the last of the diseased cows and brought them to the University farm and they are there now. We have
studied these diseased animals year after year and have found many valuable facts; a bulletin on the subject by Dr. H. L. Russell giving the results in detail will be sent to any and all persons applying for it.

I do not think the state ought always to step in and take away a man's right to keep diseased animals. It may be best, but it is well worth considering that the owner has some right to these animals provided he takes proper care of them. If it interferes with the best interests of the commonwealth to have our students do this work, we want to know it. We can gain information here which will set us all to thinking about this disease which has come into our state and which we must attack wisely and vigorously. I believe we are going to do it. I want to say to the legislators here that the subject of bovine tuberculosis will be a live question in the hall of this building at no distant day. At this time and until there is adequate legislation let each man see that his own herd is free from disease. Governor Hoard said the other day that he killed five animals in his own herd having tuberculosis for the sake of the herd. If we go on feeding and milking cows, keeping more and more cattle on the farm, under higher pressure, we must exercise more intelligence, more watchfulness, more push to keep ourselves up to the times. Live stock matters grow more and more difficult as we increase in the amount of stock kept on a given farm. A great city has very different rules for sanitation from a village. We need to have more education, more watchfulness, push and intelligence if we are going to keep up with the ever increasing troubles. Denmark found more than one-third of her animals diseased. Wisconsin is not so bad by a long way.

Dr. Clute: In my paper I brought out the same idea that the professor does in regard to retaining animals affected with the disease. In several cases I have accomplished this, while, of course, as the law is at present, they really ought to be condemned. I believe it is practicable in very valuable animals. Otherwise I do not. They have done that in Pennsylvania, and the owner will keep them for five or six months and send for the state veterinarian. The only way that can be done successfully
is to do it under state supervision, so that you can keep track of that stock and have a qualified man look them over once in a while. If this can be done at state expense, I think it is the proper thing to try.

Mr. McKerrow: We will have to bring this discussion to a close, but let me say that it a great question in Wisconsin as it has been in other states. The veterinarians are acting upon it. The state board of health and the state board of agriculture have concluded that they would take a hand, and have appointed a committee to confer with the state veterinarian and the state bacteriologist to discuss what may be done to help clean up the herds of Wisconsin and at the same time respect the rights of owners, and I believe that this legislature has sense enough to see that we must have some kind of a law that will take care of the diseased herds and at the same time respect the rights of the owners of those herds. When we have reached that we have reached a satisfactory conclusion of this whole matter. It may be said that no state has yet reached a conclusion that is satisfactory to everybody, but we hope in Wisconsin to get as near it as they have anywhere else.

We would like to spend another hour upon this subject, and I think it could be done profitably, but we will have to take up the next subject on the afternoon program, "The Present Condition of the Good Roads Movement," presented by Hon. R. L. Joiner, of Dodgeville.