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ERADICATION OF CATTLE TICK.

Hearings before the Committee



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AGRICULTURAL APPROPRIATION BILL

HEARINGS

BEFORE THE

U. S. Congress. Senate.

COMMITTEE ON AGRICULTURE AND FORESTRY

UNITED STATES SENATE

SIXTY-SECOND CONGRESS

THIRD SESSION

ON

ERADICATION OF CATTLE TICK

JANUARY 4, 1913



WASHINGTON
GOVERNMENT PRINTING OFFICE
1913

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MAR 20 1918

Recat. R.V.S. 18 N 52
C. A. S. March 24/13

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AGRICULTURAL APPROPRIATION BILL.

SOUTHERN CATTLE TICK ERADICATION.

SATURDAY, JANUARY 4, 1913.

COMMITTEE ON AGRICULTURE AND FORESTRY,
UNITED STATES SENATE,
Washington, D. C.

The committee assembled at 10.30 o'clock a. m. for the purpose of hearing certain gentlemen on the eradication of the southern cattle tick.

Present: Senators Burnham (chairman), Page, Crawford, Chamberlain, and Sanders.

The CHAIRMAN. Gentlemen, the committee will come to order. We have here several gentlemen from different States who are to be heard in relation to a matter that will come, perhaps, under the appropriation bill.

Dr. Cary, of Alabama, is perhaps informed in regard to the members present, and he may make his statement. I desire, Dr. Cary, that you and those who may make statements here, shall avoid, so far as possible, repetition of what has been said before the House committee, because the House committee has had those statements taken down and they will be printed.

Dr. CARY. I have suggested to the men, Mr. Chairman, that each man confine his remarks to the important things he desires to say, and give his reasons why each State could use more help—more Federal help.

STATEMENT OF DR. C. A. CARY, STATE VETERINARIAN OF ALABAMA, AUBURN, ALA.

The CHAIRMAN. Will you please state definitely, in the first place, what the subject matter of this hearing is?

Dr. CARY. The subject matter is the question of eradicating the cattle tick that conveys the cause of disease, or is the cause of tick fever, and kills off a great many of the southern cattle, and thereby induces the United States Government to quarantine all the infested area in the South, taking them off the world markets. That discriminates against southern cattle and puts them off the world's markets.

The CHAIRMAN. Dr. Cary, let me suggest for the record that you state what your official position is.

Dr. CARY. I am State veterinarian of Alabama.

The CHAIRMAN. Give your full name.

Dr. CARY. Dr. C. A. Cary, of Auburn, Ala.; State veterinarian and chairman of the committee appointed by the Southern Agricultural Workers; that embraces the entire southern infected area. This committee was appointed to take up this matter, especially before Congress.

The CHAIRMAN. Now you may proceed with your statement.

Dr. CARY. The general question is the eliminating of this disease from the South by getting rid of the carrier of the disease, the tick.

Senator CRAWFORD. To what extent is it done?

Dr. CARY. Last year the Government appropriated \$250,000 for leadership in this work. The States have given as much, and some of them two or more times as much for the work.

Now, you ask why the different States come here and ask for Federal help. They come here simply for this reason: The Department of Agriculture, under the Bureau of Animal Industry, has quarantined the South, and in order to lift that quarantine these ticks must be destroyed, and the Government must know that, by having inspectors there to know when the ticks have been eradicated. Furthermore, these Government inspectors are men qualified and educated to carry on that work and direct and instruct the people.

Senator CHAMBERLAIN. Have the efforts of the Government and of the States diminished the big area affected by the tick?

Dr. CARY. About one-fourth. I stated yesterday one-third, but after seeing the chief of the bureau yesterday he stated it was one-fourth; that one-fourth of the infested area has been cleared since we started the work.

Senator CRAWFORD. And how much money have you been getting from the Federal Government for this work?

Dr. CARY. We got last year \$250,000.

Senator CRAWFORD. For how large a territory—all over the South?

Dr. CARY. All over the South that was.

Senator CRAWFORD. And you want more than that this time?

Dr. CARY. That is what we are here to ask you for.

Senator CRAWFORD. What is Alabama doing toward it? How much money has she raised for this work?

Dr. CARY. The State and the counties cooperated in this work—last year the State and counties gave about twice as much as was given by the Federal department. I can not give you the exact figures.

We want in Alabama about 10 or 12 more inspectors for the next year from the Government, in order to be leaders in this work. You understand that these men are to be the leaders and direct the work.

I do not want to take more time, because there are other speakers.

Senator CHAMBERLAIN. Let me ask you one question, Doctor, before you leave. I have before me a map showing the affected area. There are about 500,000 square miles now affected?

Dr. CARY. About that.

Senator CHAMBERLAIN. How much was it when the Government undertook to assist the States?

Dr. CARY. There have been cleaned up something like 165,000 to 180,000 square miles.

Senator CHAMBERLAIN. Much or all of this territory was originally quarantined against?

Dr. CARY. Yes, sir.

Senator CHAMBERLAIN. As the area has been cleared up of the tick pest it has been released?

Dr. CARY. Yes, sir.

Senator CHAMBERLAIN. Released from quarantine?

Dr. CARY. Yes, sir.

Senator CHAMBERLAIN. And there is some other territory now within the affected area that is expected to be released soon?

Dr. CARY. Yes; expected to be released soon—to be released by the 1st of April, I think.

Senator CHAMBERLAIN. Has the effort to rid the country of the pest been quite effective?

Dr. CARY. As far as it has gone. So far as it has been applied it has been effective.

Senator CHAMBERLAIN. Is it possible to rid the tick from the whole territory?

Dr. CARY. There is no doubt about that.

The CHAIRMAN. How long has the Government been assisting in this work?

Dr. CARY. Dr. Dalrymple can answer that question.

Dr. DALRYMPLE. Since 1906.

Senator CRAWFORD. How do you do this? Do you have dipping tanks?

Dr. CARY. It is done by using dipping vats.

Senator CRAWFORD. Our State, at its own expense, built these dipping vats all over the State and appropriates the money for their maintenance.

Dr. CARY. The counties and the States do a great deal of that; the counties in the State, in cooperation with the State. But you have a good many Federal men who are superintending that work.

Senator CRAWFORD. Supervising it?

Dr. CARY. Yes, sir; that is what we want these fellows for. We have a much wider territory, in a sense, and a great deal more work to do than you have in the Northwest in your mange question.

The CHAIRMAN. This plague of the ticks, as you call them, has been continued how long?

Dr. CARY. In 1906 the Federal aid began.

The CHAIRMAN. Yes; the Government has assisted since that time, but how long has it been since the ticks were known to cause the disease?

Dr. CARY. It has been there for years and years, long before the Government found that the tick transmitted the cause of the disease. But for years and years we did not know what the cause of this Texas fever or tick fever was. We did not know it until about 20 years ago, or a little over, when it was discovered at the Department of Agriculture.

The CHAIRMAN. You say now that it is lessening?

Dr. CARY. It is lessening; there is no question about that. It is no more an experimental work; it is an absolute fact that we can eliminate it; get rid of it.

The CHAIRMAN. Just what are the methods of eradication?

Dr. CARY. By the dipping vat largely. That is the most practicable method. There are other methods that are used, but that is the most practicable and efficient.

Senator CRAWFORD. I presume it acts like this disease we have—the manges. It affects cattle if they are allowed to run down and get poor and lank and lean?

Dr. CARY. Only it is worse than that.

Senator CRAWFORD. And good fat animals resist it; it does not harm them?

Dr. CARY. No, sir. It is different from that. The condition of the animal does not signify resistance. Some of the fattest animals are the quickest to die with the disease. But it does do this: It restrains the production of cattle in the South in that we can not profitably grow beef or produce milk; neither can we expect to handle new cattle for improvement of our cattle. It simply retards our cattle industry to such an extent, as compared with the North, that we are not in it.

The CHAIRMAN. What are the States especially affected with it?

Dr. CARY. Nearly all the Southern States. Virginia is nearly clean, and Tennessee is nearly clean, as you will see, but all the other infested States have quite a territory that is not tick free. North Carolina is about half clean.

Senator CHAMBERLAIN. Forty-three out of the 51 counties in Tennessee have been cleared?

Dr. CARY. Yes, sir.

Senator PAGE. What is the State worst affected?

Dr. CARY. Texas probably has the largest infested area. It is more extensive in Texas than in any other State?

Senator PAGE. Doctor, explain this, please: We have had for years ticks in southern cattle. I am a hide dealer, and I know that we have had ticks in southern cattle for some time. Is this something new, comparatively, or is it the same old disease, with greater force?

Dr. CARY. I am glad you brought that point out. I did not wish to be so long in discussing this matter, but I will say this in regard to that, that there is a discrimination against tick-marked hides—what is that discrimination in hides, Dr. Dalrymple?

Dr. DALRYMPLE. It is 10 per cent.

Dr. CARY. Ten per cent discrimination on hides that have been attacked by the cattle tick. So that injures the hide as a product of the South. The cattle tick has been in existence for years in the South.

I do not know how long, but it is probable that this tick came in by way of Florida by the Spanish, or by way of Mexico by the Spanish. The Spanish brought it to America from Africa.

Senator PAGE. As I understand it, when a tick first imbeds itself in the hide of an animal it is not bigger than a pinhead, is it?

Dr. CARY. It is just a little seed tick.

Senator PAGE. Then it grows to be almost half the size of a nutmeg?

Dr. CARY. Yes; and all the time it is taking the blood from the animal.

Senator PAGE. And when it satiates itself it drops off.

Dr. CARY. Yes. They produce a large number of eggs; these eggs hatch, and the process is repeated.

Senator PAGE. So that the whole surface of the animal underneath might be affected?

Dr. CARY. The whole body might be covered.

Dr. DALRYMPLE. It destroys the animal for all purposes.

Dr. CARY. Practically, that is it. And it does prohibit cattle production in the South.

The CHAIRMAN. You are now receiving \$250,000?

Dr. CARY. Yes, sir.

The CHAIRMAN. How much do you want to increase that amount?

Dr. CARY. We went to the Department of Agriculture before we went to the House committee and, in conjunction with the bureau men, who know the bureau side—the Federal side—we figured that with what we wanted this year in the respective States infested, 150 new men. The Bureau of Animal Industry figured that each man would cost about \$2,500, and that means about \$375,000.

The CHAIRMAN. In addition to the \$250,000?

Dr. CARY. In addition to what is now given. That looks big, but let me say that is not to be continuous, if we get it. This appropriation will stop when we get rid of the tick.

This will allow the quarantine line to be removed. At the present time if tick-infested cattle are permitted to come into the northern area, the cattle there die off also with tick fever.

Senator PAGE. When the southern cattle infested by the tick move into the northern market they convey the fever, do they not?

Dr. CARY. They convey the tick, and the tick conveys the cause of tick fever.

Senator PAGE. The tick itself does not thrive in the northern climate?

Dr. CARY. Yes, sir; in the summer time.

Senator PAGE. But it affects the northern cattle?

Dr. CARY. Yes, sir. We can not bring northern cattle into the South, because they die. We can hardly improve our cattle on that account. It is a very grave thing with us. It is a national question; it is not limited to the South. It is limited only to the United States, because it affects the entire United States. The United States must take care of this quarantine; they have to protect the cattle. The reason that induced them to put this quarantine upon the South was the western range men who bought cattle in Texas carried them to the northern ranges and infected their pastures in the summer, and they lost great numbers of western cattle. That is what induced the Government to put this quarantine on the South.

It has hurt the South worse than it has the North, but it hurts the North as well.

Another point of interest right there: A few years ago Germany put an embargo on American meats largely on account of the tick fever. While it was absurd in a way, it was done for that purpose.

The CHAIRMAN. Doctor, is there anything further that you care to say?

Dr. CARY. I would like to have these men state, in a few words, their views on the subject.

The CHAIRMAN. If you will give us the names of the gentlemen you wish to call we will be glad to hear them. Whom will you call first?

Dr. CARY. I will call on Dr. W. H. Dalrymple, professor of veterinary science and a member of the board of live-stock commissioners of Louisiana.

Senator CHAMBERLAIN. Before you leave the stand, Dr. Cary, let me ask you this: What proportion of Alabama was at first infected by the cattle tick—all of it?

Dr. CARY. All of it.

Senator CHAMBERLAIN. How much now has been eliminated by quarantine?

Dr. CARY. We have been working in 12 counties, but there is only 1 county from which the tick has been eliminated. We lack educated help. However, we expect other counties to eliminate the pest next year.

The sentiment is much more in favor of the work now. You have to educate the people to an appreciation of these things, because the people did not know why the tick injured the cattle.

Senator PAGE. Do you establish a quarantine as between those counties that you have recovered and the counties that are infected?

Dr. CARY. Yes; as soon as a county is free of ticks it is protected. We have it to do. If we did not do it the county would be reinfected.

The CHAIRMAN. Dr. Cary, if you have nothing more to say we shall be glad to hear Dr. Dalrymple.

Dr. CARY. I thank you very much, Mr. Chairman.

The CHAIRMAN. And we thank you, Dr. Cary.

STATEMENT OF DR. W. H. DALRYMPLE, PROFESSOR OF VETERINARY SCIENCE AND A MEMBER OF THE BOARD OF LIVE STOCK COMMISSIONERS OF LOUISIANA, BATON ROUGE, LA.

The CHAIRMAN. Dr. Dalrymple, please state your name, residence, and profession.

Dr. DALRYMPLE. W. H. Dalrymple: I have the chair of veterinary science in the Louisiana State University; my residence is Baton Rouge, La. I am also a member of our State live-stock sanitary board.

Mr. Chairman and members of the committee, I might say that I had the honor of appearing before the House committee six years ago, when the first appropriation was made for this work, and since that time, as you have just heard, something like 165,000 square miles of southern territory have been reclaimed—that is, the tick has been eradicated from that territory, and which is now in what is called the free area. In other words, it is free just as much as any other section of the United States.

This quarantine that we have had put against us prohibits our cattle going to any of the large markets of the country, except for, I think, probably 60 days in the coldest months of the year, after they have been inspected by Federal inspectors and it has been seen that there are no ticks on them. Notwithstanding that fact they are placed in parts of the stockyards that are set aside for southern cattle, which means ticky cattle, or cattle from the tick-infested area. They may have no ticks on them, they may be just as fine butcher stock as the western man's animals, but they are discriminated against because they come from the infested area.

I think the estimate made by the Federal authorities is that something like 1,000,000 southern cattle are marketed in the markets of the North annually, and the discrimination on account of the tick is from \$3 to \$5 a head. There is one item of three millions to five

millions of dollars that the people of the South pay annually as a tribute to the cattle tick.

Speaking for my own State, after the Federal appropriation was made in 1906, Louisiana appropriated a small amount at that time, \$5,000 a year for two years for tick eradication. I might say that the conditions were that the money was not to do the work, the Federal money, but was to assist those who desired to help themselves, which is a very good basis, I think.

Our State appropriated \$5,000 a year for two years, making \$10,000 in two years, and that has been the amount that has been appropriated every year since. Of course we are away down below the quarantine line, if you will, and we started to work in two of our northern parishes. As you may remember, Louisiana is divided into parishes. Since then the work has been carried on in other parishes.

In my own parish, the East Baton Rouge Parish, 40 or 50 dipping vats have been put up entirely at the expense of the people themselves and given to the neighbors to use gratuitously. There are some other parishes that have done the same thing. The parish authorities have voted money for the building of the dipping vats in each ward of the parish.

There is one parish that I remember just now; we call it East Feliciana, where the police jury—that is the name of the local authority—voted enough money to build one dipping vat in each ward (there are eight wards), and afterwards some stockmen decided to put in half the money, which made 16 dipping vats; and then it was decided by private vat owners that if the parish would pay for the materials, which are very cheap, and keep up the solution that they would make them public dipping vats.

You see that the aggregate of the local money is quite considerable in addition to the State money. I could not give you the exact amount. We have only been working in two parishes, you might say, systematically—that is, under the Federal and State cooperation—but the people themselves have been taking it up and doing it, and it is on their demand that we are requiring or requesting the additional Federal help to assist in that work.

We have one parish in which we took advantage of the recent disastrous overflow of the Mississippi River, just opposite Vicksburg. When the overflow came we decided that it would almost entirely eliminate the ticks from this overflowed district, and we took advantage of that and sent out information to the people to see if they would put on restrictions—the parish authorities—and not allow any cattle to come back into the overflowed parts without having been dipped at least once in the arsenical solution, a standard solution. Then, after they were dipped, they would bring the clean cattle back into a tick-free parish. And they did so. We were able to get some Federal assistance in the form of an inspector to help them along, direct the preparation of the dipping solution, and operation of the dipping vats; and possibly at the end of this next summer that parish will be cleared of ticks entirely, just by taking advantage of the overflowed condition of that area. So you will see that we are losing no opportunity locally to take advantage of every possibility that presents itself to enable us to overcome this menace.

Senator CRAWFORD. Do I understand, then, that after you have dipped cattle and cleaned the ticks from the cattle that these ticks will have a habitat there in that neighborhood on other cattle, or these same cattle may be exposed again by staying in that infected region?

Dr. DALRYMPLE. The cattle tick is the only tick that we are concerned with, because it is the only one that carries the organism of Texas fever. Of course, it is a parasite, and it has to have its host to live on or it would starve to death.

Senator CRAWFORD. But if the animals have been put through this process, and the ticks have been killed, if they remain in that infected territory they will be infected over again?

Dr. DALRYMPLE. Yes, sir. Perhaps I should explain a little more about the method or process. We have found out that in our latitude the life history of the cattle tick is just about 22 days from the time the little seed tick gets on until all the changes in the life history of the tick take place on the animal: and then the large female tick, which is engorged and is impregnated, drops to the ground to lay eggs. She will lay from 1,500 to 5,000 eggs at a laying. These, of course, hatch into little seed ticks. In some parts they dip every two weeks during the season. But in Louisiana and some of the other States that are under the direction of one of the Federal men we dip every 21 days. That is just one day short of the time that the ticks drop off, so that we do not allow the ticks to mature and drop off. The animals gather the ticks, and every 21 days in some States and every 14 days in others they bring them to the vats and dip them.

We are satisfied that, with sufficient vats and sufficient help and cooperation of the people, we could clean the whole State in one season, practically, of the tick.

Senator CHAMBERLAIN. Your efforts have proven that you can absolutely clear a particular area of the tick?

Dr. DALRYMPLE. Absolutely. It was only last summer that we had a representative from the Australian Government, Dr. C. J. Pound, the Government bacteriologist, and others looking into our methods. Its use means absolute tick destruction. It is the best, and by its use the tick can be stamped out.

Senator CHAMBERLAIN. What is the formula?

Dr. DALRYMPLE. The formula of the solution?

Senator CHAMBERLAIN. Yes.

Dr. DALRYMPLE. Simply white arsenic, sodium carbonate, or ordinary washing soda, and pine tar.

Senator CHAMBERLAIN. That is not very expensive, is it?

Dr. DALRYMPLE. Five dollars will fill a 1,500-gallon vat.

Senator CHAMBERLAIN. How many animals will you dip with that?

Dr. DALRYMPLE. They will run, perhaps, 300 or 400 head of animals through that solution, and then they will keep on reinforcing it.

A VOICE. It will cost about 25 cents to dip one for one season.

Dr. DALRYMPLE. And the vats. Somebody said yesterday that they will run from \$35 to \$75. Some of our farmers in Louisiana have paid as much as \$150 for their private tick vats, and they have told me that they would not take \$1,000 for them, when they considered what they had done in the way of eliminating the tick.

Speaking about hides, I have a letter in my possession from one of the large exporters in Louisiana. He said that if we could get rid of the tick that he could pay at least 1 cent per pound more for the hides.

SENATOR PAGE. The southern hides run a little light, do they not?

DR. DALRYMPLE. Yes. We have found that the solution is destroying the grubs in the backs of the cattle, and that is a tremendous thing from an economic point of view.

SENATOR PAGE. Those we have in the North. I am quite interested.

DR. DALRYMPLE. We have them down our way, too.

SENATOR CRAWFORD. What was that—destroyed what?

DR. DALRYMPLE. The grubs.

SENATOR PAGE. The "warbles" is a common name.

DR. DALRYMPLE. The great object of this work is to get an open market to the whole of the United States for our cattle. We are absolutely hemmed in; we can not compete with our western friends in the market. The South, with her magnificent opportunities for her cattle growing, etc., is prohibited from competing on account of this tick. We could grow cattle for the whole United States and have some to export, too.

SENATOR PAGE. You say you want more inspectors?

DR. DALRYMPLE. Yes, sir.

SENATOR PAGE. Why? If you have the matter fully in hand and know just what to do, why do you need inspectors?

DR. DALRYMPLE. The inspector, of course, is a man who is qualified to take charge of that work. The States expend their money, their share of the money. You remember that the State at the beginning put up its share of the expense.

SENATOR CRAWFORD. This money which you want us to furnish is largely to be used in pay for these inspectors?

DR. DALRYMPLE. For the Department of Agriculture.

SENATOR CRAWFORD. Where can we get inspectors to use up half a million dollars a year?

DR. DALRYMPLE. There are lots of men in the civil service.

SENATOR PAGE. You want \$150,000?

DR. DALRYMPLE. You are referring to money and I am referring to men. We want 150 more men in addition to what we have—Federal inspectors. The local money is expended under the direction of these Federal men in the building of dipping vats, etc. The Government does not build any of these vats down there, but they superintend and show the people how to put them up to the best advantage.

In the early days we had to work and educate the people against very crass ignorance, as you may imagine. We have had to educate them in regard to the new methods. People have lived all their lives under tick conditions. They have never seen anything to compare them with what would be tick freedom. The importance of this work can not be overestimated. I know one case, and it was made the subject of an illustration by the Government people. It is a very good one. It is that of a common Mississippi steer which weighed 730 pounds before it was dipped. After dipping two or three or four times in just exactly 60 days that animal weighed 1,015, or 285 pounds gain on the same food in 60 days.

I figured with one of our butchers and asked him: "What would you give before it was dipped?" He said: "I wouldn't give anything; it wouldn't suit me." I said: "Put a price on it." He said: "I wouldn't pay more than 2½ cents a pound." I said: "What would you give for the same steer after 60 days?" He said: "I can give you at least 3½ cents a pound."

There was not only an increase in the weight of the steer, but in the price per pound. The fact is that the steer gained \$17.28 in 60 days just by getting the ticks off the feed bill, really.

Instead of the ticks sucking the blood and getting the benefit of it, the animal is getting the benefit of that blood that the tick got.

Senator PAGE. Does this tick prove fatal to some animals?

Dr. DALRYMPLE. Oh, yes; by depletion of the blood. Our southern cattle are immune to the fever, but the depletion of the blood kills or impairs them. I think it has been ascertained that an animal will sometimes lose as much as 200 pounds of blood in a season from the tick, and it prevents fattening. It reduces the milk supply at least 10 per cent. In fact, tick eradication is the basis of our agricultural prosperity, and in that, as Dr. Cary has said, it is not a sectional question.

Senator PAGE. We get a great many thousand skins from the South that are taken off animals about a year old that are poor in the center, and the tick has done from 10 to 50 per cent of damage to the hide.

Dr. DALRYMPLE. You get an irregularity in the hide?

Senator PAGE. The tick lays itself in the grain of the hide, but when the hide is tanned it shows through to the finished side—to the flesh side of the skin.

Dr. DALRYMPLE. Yes, sir.

Senator PAGE. And on your live stock it does a great damage, much more than you have stated.

Dr. DALRYMPLE. Yes; there is no doubt about that.

And so it is, we say, simply to get rid of this barrier, if you will, so that we can bring the animals from the North to improve our stock, and then have the markets of the world open to us when we ship.

I thank you.

The CHAIRMAN. Whom do you wish to call next?

Dr. CARY. The next will be Dr. George R. White, State veterinarian of Tennessee.

STATEMENT OF DR. GEORGE R. WHITE, STATE LIVE-STOCK INSPECTOR, NASHVILLE, TENN.

Dr. WHITE. Mr. Chairman and gentlemen of the committee, I am not going to take more than two minutes of your time. I just want to show the result that we have obtained in Tennessee through this tick-eradication work.

Tick eradication started in Tennessee about seven or eight years ago. At that time we had 51 counties out of 96 counties quarantined on account of this parasite. That work has been conducted by the counties and the State in cooperation with the Federal Government, and at this time we have succeeded in eradicating ticks, as you will see from the green in 43 counties on this map here.

Senator CRAWFORD. The green represents the localities where they have been eradicated?

Dr. WHITE. Where they have been eradicated. The white represents the counties where no tick fever ever appeared, and the black represents the present quarantined area.

That means that after six or seven years' work we have succeeded in eradicating ticks in our State down to about seven counties.

The CHAIRMAN. When you began the work did the ticks extend all over the State?

Dr. WHITE. Not in those white counties.

Senator CRAWFORD. But in the blue or green?

Dr. WHITE. Yes, sir. But if ticks can be eradicated in 43 counties in Tennessee they can unquestionably be eradicated in those other seven counties, and if they can be eradicated in the whole State of Tennessee they can be eradicated in Florida, Georgia, and all the other tick-infested States.

Senator PAGE. How do you account for the absence of the ticks in the white counties on your map?

Dr. WHITE. It had not time to spread that far north. The disease was gradually going farther and farther north each and every year.

Senator CRAWFORD. You did all that in Tennessee without very much help from the Federal Government, did you not?

Dr. WHITE. We received more Federal aid there than any other State, because this Federal Government aid was furnished those States on the northern border to a greater extent than it was to these Southern States. If those people would receive as much Federal Government aid as Tennessee has received, ticks could be eradicated in Georgia, Alabama, Florida, and most of these other States in three or four more years. There is nothing experimental in tick eradication. It has been demonstrated as a fact, as this map will show to any thinking man. It simply resolves itself into a question of men and money.

Senator CHAMBERLAIN. In those 43 counties in Tennessee from which you have eradicated the tick, have they had the quarantine released?

Dr. WHITE. They have been released from quarantine.

Senator CHAMBERLAIN. So that the cattle from them, formerly infected, can go into the northern markets?

Dr. WHITE. Go anywhere without any quarantine restrictions. This tick will probably be eradicated finally, even with the small expenditure now made on the part of the Federal Government, but at that rate of appropriation it will be 15 or 20 years before these ticks will be eradicated from these Southern States.

Our idea is to have you gentlemen consider the advisability of increasing this appropriation so that this work can be done in 5 or 6 or 7 years, in place of letting it run along for 15 or 20 years or 25 years, because when the ticks are finally eradicated from those States, the Federal appropriation for this work will, of course, cease. It is not a continuous proposition by any means.

I thank you very much.

The CHAIRMAN. Whom will you call next, Dr. Cary?

Dr. CARY. Dr. Peter F. Bahnsen, State veterinarian of Georgia.

**STATEMENT OF DR. PETER F. BAHNSEN, STATE VETERINARIAN
OF GEORGIA, OF ATLANTA, GA.**

Dr. BAHNSEN. Mr. Chairman and gentlemen, in regard to tick eradication there are a few points that have already been discussed that I would like to further elucidate.

A tick-infested area is not absolutely covered with ticks. There are certain areas within the tick-infested areas that are free from ticks, but the people in that free area, in those free districts, get no benefit from the fact that they are free of this parasite. Their cattle are restricted from the markets, just as much so as cattle from the infected areas—that is, from infected premises. Nor can they be shipped under any conditions. The Federal Government would not supervise an inspection from tick-free premises within a tick-infested area, in order that they be relieved from quarantine and put on an equal footing with the cattle from the North.

Nor can the State authorities make this inspection and certify to it. That must be done by the Federal Government. The State is not recognized along those lines. It is absolutely essential if this work of tick eradication is to progress, as it should progress, that the Federal Government make a liberal appropriation in order to supervise or rather to investigate and then release from quarantine such territory as is free of this pest. Of course, as far as the work in a tick-infested area or a tick-infested premises is concerned, that is mostly done by the State. Very little of the money given by the Federal Government goes to do any of the actual field work, except supervision. Of course, they have to supervise it.

If we do free a county we can not release it from quarantine; that would not be in our power at all. The Federal Government has to have a man on the job who will look into this matter, and it is only his word that finally releases the county from quarantine.

Senator CHAMBERLAIN. Even before efforts were made to eradicate the tick the Government was at enormous expense to quarantine the North against the South.

Dr. BAHNSEN. It was at the request of the North that the southern cattle were quarantined.

Senator CHAMBERLAIN. I say it was a large expense on that account.

Dr. BAHNSEN. Yes, sir.

Senator CHAMBERLAIN. That will be gradually eliminated when the tick is eliminated?

Dr. BAHNSEN. When the tick is eliminated that will be absolutely eliminated, all expense for quarantine against the cattle tick. There will be no further expense. In other words, it is the only appropriation that is called for right now that we can say with absolute certainty will, within a fixed number of years, according to the amount of money and the number of men we will have to do this work, be completed, and when it is done it will always remain done.

Since the work was taken up by the Government in 1906 not a single county that has been released from quarantine has been placed back under quarantine.

We know that just across the imaginary border between a tick infested county and a free county they are not free from ticks on one side and heavily infested on the other; we know that is not reasonable. But infestation is there, and we know that people will violate

the quarantine restrictions and cross over into the free and released area; but when they do so they take a great deal of precaution to see that they do not carry ticks. Records for the past 6 years show absolutely that once the work is completed there is no danger of reinfestation again.

The line has moved progressively to the south, and not a county has been placed back in quarantine after being released from quarantine.

In regard to the State aid, the States—at least those that I am familiar with—have all done more than their share of work, so far as the educational feature of it is concerned, and the expenditures of money. They have built most of the dipping vats and done most of the cattle farm-to-farm inspection. That has always been done by the State and counties, although the Federal Government has to have a hand in it in order to be able to release the territory from quarantine. They have to have a part in it. The counties provide money and the States provides money; some States more, some States less. Last year the State of Georgia gave \$15,000. That was the first liberal appropriation that was given by the State for the work of tick eradication. We fully expect to get a larger appropriation. In addition, the counties have always appropriated very liberally where we have gone into the matter with them.

Another point that has already been brought out that I should like to emphasize is the one raised by Senator Crawford, who asked if cattle were once infected if they might not become reinfected. One disinfection or two disinfections will not free any premises from ticks. You have to disinfect cattle regularly at an interval not exceeding three weeks; that is the very limit. It is much better to disinfect every 14 days; and from 10 to 15 or 16 disinfections, beginning April 1 of any year, will absolutely eradicate the tick from any premises or from any county or from any State, provided the work is done regularly and thoroughly. That is all there is to tick eradication.

So we know that we can finish this work in a few years; we know we can do it, because we have had the experience in the matter, and we know that we are doing it right along. The only time that we have ever had any trouble is when, for some reason, an individual either fails to disinfect them regularly or fails to do it thoroughly.

Senator CRAWFORD. Do you find a good deal of prejudice among people against doing anything of that sort?

Dr. BAHNSEN. Yes. It is so in every work of advancement. There is no work of advancement that does not meet with opposition.

Senator CRAWFORD. They think you are interfering with their personal privilege?

Dr. BAHNSEN. That is right. That is often so when you begin to talk to a man about raising 40 bushels of corn instead of 14. He will tell you, "You are a fool, and you can not do it." At the same time when you demonstrate it to him you would think that he would believe that you could.

Senator CHAMBERLAIN. Are your States passing any laws compelling this eradication?

Dr. BAHNSEN. Yes, sir; we have a law enforcing disinfection and making a violation of that law a misdemeanor.

Senator CHAMBERLAIN. That is very essential, I should think?

DR. BAHNSEN. Yes, sir. In fact, we could not make any headway at all without it.

I thank you.

The CHAIRMAN. Who is your next speaker, Dr. Cary?

DR. CARY. The next will be Dr. R. F. Kolb.

STATEMENT OF DR. R. F. KOLB, COMMISSIONER OF AGRICULTURE OF ALABAMA, MONTGOMERY, ALA.

The CHAIRMAN. Dr. Kolb, you are commissioner of agriculture?

DR. KOLB. Commissioner of agriculture in Alabama; yes, sir.

The CHAIRMAN. And have been for a good many years?

DR. KOLB. Well, I have only been now for two years. I was commissioner and held the same office over 20 years ago, but I retired and am one of the "comebacks."

Mr. Chairman and members of the committee, I am very glad indeed that you had an opportunity of hearing the gentlemen who have preceded me, because I want to assure you that they are experts, educated veterinarians, and know what they are talking about, and I can only indorse what they have said and emphasize the needs of the South and for the United States Government to aid us with more men and money. That is what we need. We are not asking for this money for ourselves, or to distribute it ourselves, but for the United States Department of Agriculture to take charge of it, of course, and by putting more men in the field, which requires a larger appropriation, in order to have a sufficient number of them to do this work, to educate our people along this line, and to absolutely, as you have been told, eradicate the tick in a very short time—within a few years.

Now, I know that in my State alone—and the National Department of Agriculture verifies it—we lose annually in Alabama over \$5,000,000 by this tick in the loss of cattle and have been doing it annually for two years, and it is increasing every year.

The United States Government ought to come to our assistance and stop this thing. We are doing all we can in the various States. While our State of Alabama has not made any direct appropriation for this special work, our counties have. We are probably giving two or three or four times as much—the counties are—than the United States Government has given: at least \$25,000 to \$30,000 to \$40,000 in the various counties. But I want to call your attention to the fact that Alabama, through her legislature and through her appropriations, is giving more money to-day in the interest of the approved methods of agriculture than any State in the Union, excepting none—South, North, East, or West. We give \$25,000 annually now, for the moneys are all paid out of the funds of my department—and I know what I am talking about—for this farm demonstration work that we carry on jointly with the State and the Department of Agriculture here. We pay three-fifths of the salaries of these demonstrators. We have one in every county in the State of Alabama. We pay every month three-fifths of the salaries of these demonstrators, while the Government only pays two-fifths. Then, in soil survey work, we are doing still more than any other State in the Union. We are carrying on this soil survey and will soon have—in a few more years—every county in the State surveyed.

We have now got about two-thirds of the State surveyed. Alabama appropriates \$10,000 annually for that purpose, and these soil surveyors are employed by the commissioner of agriculture of my State to cooperate in that work with the soil surveyors of the United States Department of Agriculture. We have four and they have four carrying on the work in every county in Alabama.

Mr. Chairman, I do not know anything that I can say that will aid you in coming to a just conclusion in this matter, except to emphasize what these experts have told you. They know what they are talking about, because they are educated in that line of work.

I thank you, gentlemen.

STATEMENT OF PROF. ARCHIBALD SMITH, PROFESSOR OF ANIMAL INDUSTRY OF THE AGRICULTURAL COLLEGE AND SECRETARY OF THE STATE LIVE-STOCK SANITARY BOARD OF MISSISSIPPI, STARKVILLE, MISS.

The CHAIRMAN. Just state your position, please.

Prof. SMITH. I have the chair of animal industry at the State Agricultural College and am secretary of the State live-stock sanitary board.

Mr. Chairman and gentlemen of the committee, when the first Federal appropriation was made for this work the State of Mississippi was far below the quarantine line, and, we having no State laws that would enable us to work, there was nothing done in that line until 1908. At that time the State made an appropriation of \$5,000 for two years' work, and as a result of our work during those two years they made an appropriation of \$40,000 to carry on this work. Now, as a result of our work since beginning, we have eight counties cleaned and above the quarantine line and an area about equal to the size of eight counties now ready to be released.

Gentlemen, we are in a peculiar condition in that State, different from some of the others, in that it is naturally a great stock-raising State. There is no State that has a greater variety of grasses and feed suitable for economic stock production, while, as you well know, cotton is the one great cash crop of the State and of the South. During these last two or three years what is known as the cotton boll weevil has been sweeping over the State, and that has made it absolutely necessary for these farmers to change their system of agriculture; they have got to adopt other methods. The farm demonstration work through the Department of Agriculture and the State departments are urging these farmers to grow other crops and to go into live-stock raising.

Gentlemen, in order to utilize these other crops when we get them grown we must necessarily have cattle and other stock, and we have got to create the conditions that will enable these people to breed and feed cattle successfully. The boll weevil has had the effect of reducing land values seriously and reducing the revenue of the farmers. When you advise those people to go into cattle raising they say, "Where am I going to get them? I can get the common cattle, the scrub cattle of the district, but there is not much money in handling them. We can not go out into the free areas of the country

and buy good cattle and ship them in here because the risk of losing them is so great."

This last year the live-stock sanitary board, in cooperation with the Federal bureau, has had men working in about 22 counties. That is all the money we have available. We have about 30 counties in the State—that is, the boards of supervisors of 30 counties are willing to appropriate funds to employ county inspectors to visit these farms and see that they are disinfected if the Federal bureau in the State could provide men to supervise their work and report to the Federal department when it is cleaned. No matter how much money the State and the county might appropriate, the area can not be released until the Federal department is satisfied through the reports from their own men that the area is free. We can not make progress any faster than the Federal department is able to supply competent inspectors to supervise their work.

During these past two years we have had over 3,000 dipping vats built within the State at an average cost of about \$35 each, and during this last year the counties of the State alone have appropriated about \$50,000 for inspectors. That will give you some idea of the interest on the part of the people.

Senator CHAMBERLAIN. The people there are pretty nearly driven to stock raising in view of the existence of the boll weevil, are they not?

Prof. SMITH. They are being forced to it, and we are doing our best to bring about a condition that will enable them to carry it on profitably. It is a very serious matter for those people. We have many farmers who come down from the North to purchase land, especially in the prairie counties. We are about ready to release half of them. The black land underlaid with lime rock is attractive to these northern farmers. The land was cheap, and they have bought large areas of it. But they were not familiar with growing cotton, and the cattle tick there prevented them from handling their cattle properly—that they took down with them, and as a result many of these people have failed to realize on their money as a result of this condition. We are trying to create a condition there that will enable those people to go down there and farm just as they would farm at home. They can grow the same crops, and if we can give them an opportunity to raise cattle as successfully there as at home there is no reason why they should not find that land very profitable. The State is appropriating very liberally; every county is appropriating liberally. The counties furnish the services of from four to five men for each county for the one man that the Federal bureau furnishes, and we are asking for at least 30 new men in Mississippi next year, in order to give relief to these people who are so desperately in need of it. We are doing our utmost not only to free the boll-weevil-infested area from ticks, but to free the other areas from ticks as rapidly as the weevil infests it, so that these people can change their methods of farming and prevent this enormous reduction in land values and the revenue of the owners.

I thank you, gentlemen.

Dr. CARY. Now, gentlemen, we will call on a man from the State of Florida, a State that has not taken up the work but wants to take it up. I introduce Dr. Dawson.

**STATEMENT OF DR. C. F. DAWSON, VETERINARIAN OF THE STATE
BOARD OF HEALTH FOR FLORIDA, JACKSONVILLE, FLA.**

Dr. DAWSON. Gentlemen of the committee, as Dr. Cary has just said, I come from a State which has not yet done anything in the line of tick eradication, but we are very much interested in the subject and expect to take it up soon. I have no doubt that the State board of health will take from its funds an amount equal to that of the other States which have started the work. I do not think it well to ask for too much money from the State legislature or from the board until we get in a position where cattle is profitable. We have to know how to handle the money before we can handle it judiciously.

We have in Florida about 850,000 animals. Most of them are known as scrub animals because they have been raised under Florida conditions, and that means under conditions which the tick produces. There is no section in Florida which is not infested with ticks. Some of our Southern States have sections, as we have already been told, where there never have been ticks. But I think in our State ticks are prevalent everywhere. We lose every year, according to the census—and I believe the report is not as heavy as it ought to be—3 per cent. That would cause us a loss of \$25,000 worth of cattle every year from what is known as exposure. It is difficult to understand how an animal would die from exposure in a climate like Florida, but we must remember that exposure means tick infestation, and that is all it does mean. If we could free Florida from ticks, we would start up practically in that country a new industry. While there are men there who have made money in the cattle business, they have made it at random, owning cattle by the thousands and not knowing much about it, and never seeing them except when they are driven up to be sold. But those people are few and far between. We want it so that everybody can raise cattle in that State profitably, but we can not do it as long as this tick is there to put a damper on it.

The best way to do is to form in every county cattle improvement clubs—not bringing the tick to the surface as being the one object for its existence there—clubs that are called "cattle improvement clubs," and having tick eradication as one of the things for which the club would work. They would meet annually at Jacksonville, or some other place, having a delegate from each one of the counties, and in that way we expect to carry on the educational side of the work. We are not expecting to jump in and eradicate in any great amount of territory in Florida suddenly. It has got to be an educational campaign. We have got to provide for that work men who can reach all the small owners of cattle, because in a country of that kind they live far away from railroads and are hard to reach and we have to pick out a certain class of man who has influence with that particular kind of person. I have an idea that our State could claim the distinction of being the point at which the cattle tick first arrived in America. St. Augustine being the oldest settlement, it may be that we are responsible in a way.

Senator CRAWFORD. You are not claiming that as any great honor?

Dr. DAWSON. No, sir; just merely a distinction. I believe that is all I have to say. Of course I have no particular or practical knowl-

edge on the real subject of dipping cattle. It is all very simple, though. All that these gentlemen have told you is absolute truth. The tick can be eradicated or destroyed and the Texas fever can be stamped out, and it is the only one that can be stamped out in that way. The peculiar life history of the tick makes it possible, and if you eradicate the life principle of the tick you then exterminate it. It is the only insect in the world that can be exterminated, in my opinion. It may be interesting to know, with regard to this cattle tick, that the discovery of the tick carrying this germ of the Texas fever was first mentioned in the history of Madison, where it was shown that diseases were insect-borne. Since that time we have discovered that malaria is carried by mosquitoes, and that yellow fever is carried by mosquitoes. This particular tick is the only one that carries this peculiar parasite that causes disease in cattle greatly resembling malaria in man.

Senator CHAMBERLAIN. There is one thing in the West more deadly than the tick, and that is the spotted fever in Montana.

Dr. DAWSON. That is all I care to say, gentlemen.

STATEMENT OF W. G. CHRISMAN, STATE VETERINARIAN OF NORTH CAROLINA, RALEIGH, N. C.

Dr. CHRISMAN. Gentlemen, I have this morning a map of North Carolina indicating what has been done in tick eradication in that State. When the work was first taken up by the United States Government in 1906 the entire State of North Carolina, with the exception of a few counties on the western border, were tick infested. The entire State was tick infested. Beginning in 1906, with the aid of the bureau, we began in the western part of our State, at the top of the Blue Ridge Mountains, with a force in eradicating ticks. We have worked consistently in that State and are now pushing our line eastward year after year, taking in a tier of counties clear across the State from north to south. From that day to this we have been able to eradicate the ticks from the western part of the State, moving eastward down to where you see this black line [indicating], and are now crossing the State from Roanoke River on the north to the Peedee River on the south. That is a clear demonstration of the fact that we can eradicate ticks by persistent and regular methods. The method used in North Carolina is a little bit different from that in some of the other States. We have not used the dipping vat, because conditions do not, as we think, warrant our doing it. We have had our inspector in the field, and have been spraying the cattle with spray pumps, and think for our particular conditions those are the best methods. Now, what we are going to do in the future depends on conditions as we find them when we get to them—whether we shall continue in the use of the spray pumps or adopt the dipping vats. From here [indicating] it is all tick infested and has always been since our country has been infested with ticks.

As the gentleman who preceded me said, our ticks came into Florida and they worked northward. The reason they have not gone farther into the Northern States is because they were stopped when they reached this point; taking in Virginia, which is north of us; from there on, the northern boundary of the coast, and all the Coast States, have been infected by these ticks, and we have worked

persistently in eradicating them; and just one glance at this little map will indicate that we can eradicate ticks successfully.

The question now comes down to one of means to continue our work and to eradicate the ticks from the territory that remains still infested. The question is now one of money and men to do the work with. We are asking you gentlemen to give us a larger appropriation for this work, because the States themselves can not eradicate the ticks without your assistance. As Dr. Bahusen has stated, no matter how well we have cleaned our territory, and although we may be ready for release, we can not ourselves release that territory until the bureau inspectors have been there and been over the field and seen conditions themselves, and these reports must come in from your men before the bureau can release this territory.

Now we are asking for more men to supervise the work. These States and counties have appropriated money to do the work, but they want the Federal men to supervise this work. We figure that in North Carolina it will take five additional men next year to provide for the work in the counties that we expect to work, and the other States have each given the estimate that that many men will be necessary in those States. We are working with a force of men throughout the year doing this work. Heretofore, in Virginia and Tennessee, the winters have been especially cold, so much so that they would kill ticks themselves, and it was not necessary for us to keep our men in the field the entire year; but now practically all this colder territory has been released from quarantine. We are working now down in the southern and eastern sections of those States, where all the winters are so mild that these ticks will live the entire year. Nature is not taking care of us. Now we have to take care of ourselves, and we have to put men and money into the proposition to work the entire year. Therefore it becomes more expensive and more costly to do that work now than at first, and now we have more territory ready to work than we had when our first appropriation was given us, about seven years ago, when the committee came up before you gentlemen asking for this appropriation.

That is why we are here to-day asking for a larger appropriation, because the needs of the work are very much larger than they have been in the past. The territory is ready. We have the territory ready right now for work, and we are simply asking for men and for money in order that we may continue—money on your part to give us the Federal aid that we should have.

The map of the United States on the desk will show the territory that was affected at first, where the first quarantine line was established by the bureau. It also indicates the amount of territory that has been released, and it also states and shows what is yet in quarantine.

Gentlemen, I thank you.

STATEMENT OF J. F. STAMFORD, FAYETTEVILLE, ARK., STATE VETERINARIAN.

Dr. STAMFORD. Gentlemen, I merely wish to state that at the beginning of this work of tick eradication, six years ago, every county within the State of Arkansas was quarantined by the National Government. At present we have 14 counties which have been released

from the national quarantine by the United States Bureau of Animal Industry. This has been done through the work of tick eradication. We have an area which composes these counties that represents something like 11,003 square miles. I desire, to show you the interest that our people have taken in this work, to say that during the last year, and during only six months of last year, 1,161 square miles of this total free area was freed through the aid of our own people from private contributions. Our State legislature will meet this month, and that body of men will look well to the interest of the agriculture of the State of Arkansas along the line of tick eradication, for the people of our State are demanding that we take up this work, and we will have to have the number of Federal men increased in order to take care of the work that we will be forced to take up during the coming years. We estimate that it will take at least eight more men from the Bureau of Animal Industry in order to supervise this work of tick eradication that will be taken up in the coming years—the coming “tick eradication” years which will start in the early days of spring.

FINAL STATEMENT OF DR. C. A. CARY.

Dr. CARY. Now, gentlemen, I simply desire to say a word in closing; which will occupy but a minute or two. We have practically four States not represented: Texas, the largest and most extensively infested; Oklahoma, South Carolina, and there is one county in Missouri. Texas demands, and should have, more men than any other State. I am sorry they have not a man here to represent it.

Senator CHAMBERLAIN. Are they interested in the subject?

Dr. CARY. Yes, sir; they have a call for at least 20 more men. Oklahoma has a call in for 20 more men. As I stated in the beginning, after getting a summary of all the other wants of the different States infested, they are calling for 150 new men from the Department of Agriculture to supervise this work. Now, this means, if we can get it, that the work will progress more rapidly in the coming years than ever before, simply because we have now about 75,000 miles of territory that we are working in that will nearly all be practically cleaned up this year, if we get sufficient Federal aid. The people are ready and want the work to go on in this area. That is just one-half as much as was cleaned in the last six years. If we do not get the money and leadership it will simply mean that this work will drag over a long period of years and in the end cost just as much or more to the States, the Government, and the counties interested.

The CHAIRMAN. If you secured this large appropriation would not the Government have difficulty in finding competent inspectors?

Dr. CARY. No, sir; I think not.

Senator CRAWFORD. That is what is in my mind. Where are you going to get an army of veterinarians who will eat up half a million dollars?

Dr. CARY. From 150 to 175 men will cover it, and there will be no trouble to get men who are skilled.

Senator CHAMBERLAIN. Does it require veterinarians?

Senator CRAWFORD. Oh, yes.

Dr. CARY. That is what we require—graduated veterinarians. There will be no difficulty about finding them.

Senator SANDERS. Mr. Chairman, as I understand it, the other departments or other divisions of the Agricultural Department have men that they can draw on for that use.

The CHAIRMAN. Very likely.

Senator SANDERS. I am told they have.

The CHAIRMAN. Is there anything further, Doctor, that you desire to say?

Dr. CARY. Not unless there are some questions. We desire to thank you gentlemen for your kind favor in giving us this hearing.

The CHAIRMAN. I wish to state to you, Dr. Cary, and you, gentlemen, that we fully appreciate the importance of this matter, and when the bill come from the House, as it will in a few days, I hope, the committee here and the Senate, of course, will give careful consideration to what has been said, and we are obliged to you for the information you have given us.

The committee thereupon adjourned.





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