Consider health and efficiency as the first prime objects to attain. Cast off all this foolish prejudice against the tuberculin test.

In December I attended the meeting at Buffalo of the International Committee for the Suppression and Control of Bovine Tuberculosis. Eleven of the wisest men on this subject—with one exception—in both Canada and United States, met there for a two days' consultation. What do you suppose was the united judgment of that body of men as to the prime causes for the alarming spread of this disease? Ignorance and dishonesty. I have shown you how I got rid of my ignorance and I could only do it by being honest towards my cattle and myself. What a cheat that man is who tries to cheat his cows and himself. My advice is to pay no attention to the law except to obey it faithfully by going ahead and acting for yourself. My course has brought me thousands of dollars. A like course will pay you well.

Ex-Gov. W. D. Hoard was unable to attend the convention on account of celebrating his fiftieth wedding anniversary.

VALUE OF RECORDS IN BREEDING COWS.

PROF. HUGH G. VAN PELT, Waterloo, Ia.

Mr. Chairman, Ladies and Gentlemen, I want to congratulate you people of Wisconsin on the great strides you have been taking in the dairy business. Especially since hearing the report of your State Dairy and Food Commissioner, I have been even more impressed with the results you have attained in dairy farming than I was before. Over in Iowa we have been trying to imitate you more or less, because we realize that, although Iowa has been preeminently a beef and pork-producing state, beef and hog products cannot be produced with the certainty of dairy products. Our farmers over there are largely quitting the feeding of beef cattle and hogs in many vicinities, because of this, but they realize that to retain the fertility of their farms,
The highest producing cow in this group has a yearly record of 17,282.2 lbs. milk and 98.2% F.A. lowest 93.7% F.A. milk and 92.4 lbs. fat. Her milk contains 4.6% butterfat and 3.7% casein. She is the type of cow that gives the utmost satisfaction to the farmer and the landlord. Her milk is rich and nourishing, and is a valuable asset to the farm. She is a true Jersey, with a head and face of fine, well-defined shape, and a body of good length and depth. Her udder is full and well-developed, and her legs are strong and well-set. She is a true Jersey, a breed of great value to the farmer who wishes to produce high-grade milk.
they must do something that will take the place of the feeding operations of the past. So, we are looking largely to the state of Wisconsin for leadership, for guides for us to follow, so that the state of Iowa may come to be the same profitable dairy state as you have over here.

With reference to the value of records in breeding dairy cattle, I believe it is safe to say that there are four different classes of records which should be given more or less consideration on every dairy farm. These various classes of records are: 1st. The production of milk and butter fat; 2d. The feed records; 3d. The breeding records, and 4th. Show yard records.

Of these four classes of records, undoubtedly the more important are the production records, because the ultimate purpose of all breeds of live stock is production. If you are breeding beef cattle, the ultimate purpose of your efforts is the block, or the beef when the animal is killed; if you are breeding hogs, the ultimate purpose of your efforts is pork; if you are breeding sheep, the ultimate purpose of your efforts is mutton, or wool, or both, and if you are breeding dairy cattle the real ultimate purpose of all your efforts is the production of milk and butterfat. Consequently, these records are all important, and they are a guide or an index showing what you are able to do, or what will be accomplished by your efforts, in breeding dairy cattle.

The pedigree of your dairy animals is valuable or not valuable according to the extent of the records which it contains. If a pedigree for six generations shows a great many good records, demonstrating that the animals which make up this pedigree have been valuable and large producers, or show yard winners, or good breeding animals, which ever the case may be, the pedigree is valuable. On the other hand, if the pedigree contains no animals—or if the history related by the pedigree shows that no animal in that pedigree has ever done anything worthy of note, the pedigree is absolutely worthless, except from the standpoint of demonstrating the purity of the blood.

One of the laws of breeding, which is most familiar to us all is, that "Like begets like, or a likeness thereof." When we have animals whose pedigrees are made up of animals that have been large producers at the pail and the churn, we can, with all reason, expect that the offspring of these animals will also
be large producers of milk and butterfat. On the other hand, if the pedigrees show no animals with records, we cannot, with any degree of certainty, expect record producing offspring. It may be possible that some place back in the generations there have been animals that have been large producers, though we have no certainty of this, nor no guide as to their value, and we have no guide as to what we can expect from the offspring of such animals.

I might say that over in Iowa, and I believe it is true on some of your farms in Wisconsin, and I know it is true in Minnesota and Nebraska and in most of our Western and Central West states—the average cow, or the cow that is being milked on the average farm—is not better, if as good, as the cows that were being milked twenty-five years ago.

Now, this being the case, there is something wrong. The farmer of the Central West, I believe, is one of the most intelligent farmers of the world and he has made great progress in the past twenty-five years. As was said by somebody else, he made more progress in the past few years than was made in the 6,000 years prior to the time of the beginning of this advancement. But here in the Central West the man who is milking the cow has been very busy with other things and he has not given the attention to his dairy cattle that they deserve. He has made wonderful improvements in the character of beef animals he is breeding and feeding, also the hogs and the horses and the farm equipment and machinery, but because of the fact that the dairy cow has been considered a side issue, he has paid very little attention to her and he has kept no records of her performance. As a result comes the unfortunate fact which Prof. Rawl presented to you the other day; namely, that there is a large percentage of the 22,000,000 cows being milked in the United States that have never returned a cent of profit to their owners, and I want to tell you that the reason why this is so is because the people who are milking those cows have not kept records. You will agree with me, because you know absolutely that there is not an American farmer living, who would, knowingly, go out to his barn day after day, and 700 times in a year milk a cow for absolutely nothing, and in many instances hand her a cent for the privilege of doing so.

Now, it is the truth, it is a fact that we know the American
farmer is doing this very thing and why? There is just one reason why he is, and that is because he doesn’t know that he is doing it; he doesn’t realize it, and there is absolutely no way for him to find out that he is milking unprofitable cows, unless he keeps records of what his herd is doing.

As a rule, I am confident that the dairy herds of the Central West are making nice profits. I believe there are very few entire herds in the United States that are losing money, but the reason that the cows are being milked that are losing money, is because they are intermingled with other cows in the herd and are covered up by the cows which are making large economical yields and large profits.

We find in the testing associations that we have started in Iowa,—and it is found everywhere where testing associations are started and records kept,—that in one and the same herd are to be found two cows standing side by side under identically the same conditions, consuming the same kind of feed and the same quantity, and one of these cows is making a handsome profit and the other cow making an absolute loss. In some instances, we have found one cow in a herd making as high as 400 pounds of butter in a year, and another cow making as low as 100 pounds or even lower. It is just as plain as anything can be that it makes no difference even though one of these cows is eating four times as much feed as the other, requiring four times as much barn room as the other, and four times as much time and care in feeding and milking her, still she is four times as good a cow as the other and much better even than that. With a very little figuring we can see that one cow is worth the other four. So, I say we are not milking these cows that are losing us money not because we want to, or because we don’t know any better. We are simply doing it because we have not yet brought ourselves to realize the difference between a good cow and a poor cow, and we never will until we begin keeping the records of the cows. Then we go further than this, we not only milk these unprofitable cows, but we save them, generation after generation, save their offspring and we do not realize that the inherent value of one calf that we are saving for a future dairy herd is far greater than another, because we have not yet brought ourselves to realize the immense value of records. We select our sires in the same way, and even though we have
raised some heifer calves from some wonderfully good cows by mating these with sires whose records we have disregarded and which would reduce them to the class of unprofitable cows, by continuing this practice, some of us have managed to stay just about where we were twenty-five years ago and I presume 5,000 years ago. In other words, we haven’t got to a point where we wish to make a change for the better.

That reminds me of what I noticed coming over in the car. A lady stood by the car door for some time and finally she said to a young man, ‘‘Will you kindly help me off this car?’’ He said, ‘‘Certainly, I will be glad to.’’ Then she explained to him. ‘‘You will notice I am very large and rather old, and consequently when I get off a car I have to get off backwards. I have been trying to get off for the last five stations, and when I go to get off the conductor thinks I am getting on and pulls me back again.’’

That is exactly what we do when we do not keep records of what our animals are doing for us. It doesn’t make any difference how good an individual may be that we have in our herd, whenever we mate her with an animal whose ancestry is poor, we don’t know it because there are no records to show it. That sire is the conductor that pulls us back again.

In selecting our sires, we must bear in mind the fact that without records we have absolutely no knowledge of what the animal itself is doing or what its ancestors have done, or what we can expect of the offspring from those animals. By keeping records we of course put ourselves to more or less expense, it takes more or less time, but when we stop to consider the time lost and the money wasted by not keeping records, we are in a position to realize whether or not we can afford to take the time and put ourselves to the meagre amount of expense that is necessary for keeping records from year to year.

Now, the breeder of dairy cattle, as a rule, realizes this. Many of you have heard famous breeders who have been keeping records for many years and they have told you the great value received from keeping records.

Sometime ago I was in Sioux county, Iowa. I met a young man from Holland who told me the history of a part of his life. Nine years prior to the time I met him he came from Holland with very little money, as he said he never expected to own a
cow or a horse, all he expected to do was to make a meagre living. One of his friends in America sent him a ticket to come, he hadn't even money enough to pay for that, though he paid it in the first year he was here and made besides, at farm labor, $300. The second year he made $350; the third, $375, and then he did what most all Hollanders, or any one else does, he got married and moved on a farm. The owner of the farm furnished everything except the horses, and gave him half, and he started to milk cows, because he had milked cows in the old country and knew how to do that. The first year he kept no records of his herd, except that at the end of the year he figured up how much money he had gotten from the creamery and divided it among his cows. I asked him to write it out, and he gave me a letter showing what he had accomplished. The first year the returns from the creamery for his cows showed $28.50 apiece, and he said he realized that that really didn't pay for the cost of feeding the cows. So he thought it over and began weighing the milk and testing it, and getting rid of the poor cows and keeping the good ones, in other words, making records. Then the next year from the 1st of March, 1905, to the 1st of March, 1906, the returns per cow were $36.20; the next year $41.20; the next year $45.84, and last year it was $53.01. He also gave me his figures on the cost of all the feed he gave these cows, and the skimmilk fed the calves and the milk used on his own table, and at the bottom of those figures he has put a figure which shows that his cows returned him a net profit of $36.09.

Now that shows you what that man accomplished by making records, a man who can hardly speak the American language even today. He knows exactly what he is doing and if he had not kept those records he would have been milking yet the same class of cows that he started with and receiving in the neighborhood of $28 per cow, while today he is making a net profit on the average of all his cows of $36.09.

I have a letter from Mr. Auten. I wrote to several breeders, just to learn what their idea was as to the value of keeping records, so I asked him what he paid for Jacoba Irene, the cow that made over 2,700 pounds of butter in three years. He told me not to tell you; but you can realize what a cow without a record going into the auction ring would be apt to bring. He says:
"Of course I have no fixed price on her value now, but she is paying me big interest on a $10,000 investment per annum."

Now, the question is, is her real intrinsic value any more today than it was five years ago when he bought her at the common average of a right good Jersey cow, and do you think that the man who owned and bred this cow would have allowed her to have gone out of his hands had he known what her real intrinsic value was? He would no more have disposed of her at the price he received for her than the man who is milking a cow 700 times a year and paying for her feed without being paid for his efforts would continue to do so if he knew what he was doing.

I also have a letter from Mr. Charles L. Hill, in which he says, "I commenced to weigh the milk of the first pure bred Guernsey I ever owned when she dropped her first calf in 1888, and have weighed each milking of every cow since that time, and as soon as the Babcock test was invented, I commenced, in 1891, to keep fat records of the cows. Any advance I may have made in the breeding or dairy business, and I might say any that I may hope to make, will be founded on the work done in keeping records of the cows. How else can we hope to work improvement? I now have animals whose maternal ancestors for seven generations have yearly milk records, and five generations have official yearly fat records."

The very fact that the man who has not kept records has not made any improvement and that the man who has kept records has made improvements should be sufficient to make us realize the extreme value of keeping records of what our animals are doing. Mr. Hill also sends me some of his records, and among them are fifty-six records of cows, ranging in age from two years old to thirteen years old, with an average milk production of 7,202.7 pounds of milk per year, an average of 377.24 pounds of butterfat.

Now, the question is, did it pay that man to know what he was doing? Has he been paid for the time which it took to do the weighing of the milk, to test the milk and keep the records? When we stop to realize the vast advance that Mr. Charles L. Hill has made in the dairy business, which he attributes to having made records of his work as he went along, we can have some idea of the value of these records.
We all know in Wisconsin what Mr. Gillett did with Colantha 4th’s Johanna. We know something about the price he would sell one of her calves. We know he bought one of these calves back and sold it for something like $8,000, and I don’t suppose that calf had any more intrinsic value than it had when it sold for $400 or $500.

When I was in Colorado a man told me he had a Holstein bull, he said, “One day I got a telegram from Mr. Gillett who offered me $500 and another one equally as good for that bull. I wired back I wouldn’t take it. Then he offered me $1,000 and I wouldn’t take it. Then I got a letter from him telling me to keep that bull, and then he told me he was very closely related to Colantha 4th’s Johanna.”

Now, the question is, was that bull any better than when he first bought it? It was simply the fact that they had found out the real value of the blood of Colantha 4th’s Johanna that made the calf valuable.

I also have a letter from Mr. C. I. Hood, in which he says: “No one can estimate in dollars and cents the value of authenticated records and the register of merit. If you could examine the strong, rugged, everyday producing cows in our herd, with their unsurpassed constitutions and dairy characteristics, and then could compare records which show that generation after generation the heifer has done better than her dam, you would begin to appreciate, as we do, the value of those authenticated records. I wonder if breeders of dairy cattle ever thought of what the tests made in the register of merit are worth to the young men who go out from the agricultural college and work among the great herds. An opportunity of this kind to arouse one’s interest was unknown a few years ago. This feature of the work leads up to others and competition grows all the while, which ultimately will double and treble the product and profit of this branch of agriculture. The records made at such farms as those owned by the Ladd Estate in Portland, Oregon; T. F. Marston, Bay City, Mich.; A. F. Pierce, Winchester, N. H.; R. A. Sibley, Spencer, Mass.; A. O. Auten, Jerseyville, Ill., are invaluable.”

Now, he brings out a point there to which every farmer and every breeder should give due consideration. Every iota of advance of success that every breeder and every farmer makes
from the standpoint of breeding, is made by the sires which he uses, and too few of us have very well bred sires to realize a fact which I am going to tell you and which is just as simple as anything could possibly be, and that fact is this: Whenever we use a sire whose resulting daughters are in the least particular poorer, less valuable or less productive than their mothers, our efforts are an absolute failure; we have accomplished nothing.

On the other hand, whenever we use a sire whose resulting daughters are in the least degree the superior of their mothers, our operations from a breeding standpoint are a success. If the increase in production of the resulting daughters of a cross with a sire produced under the same conditions is only five or ten pounds of butter more a year than their mothers, we are making a degree of success out of our business, and if we continue this success generation after generation, producing daughters that will produce from five to ten or fifteen pounds more butter a year than their mothers, it is only a course of a short time until we will have a herd which is just as good as anybody's herd.

I was impressed with this thought that had never come to me before, in talking with Mr. Gillett. I asked him why he disposed of a certain bull while he was yet young, and he told me that he found that the daughters from that bull did not produce any more milk than their mothers, and that the milk which they did produce was one-tenth of one per cent poorer. He was keeping records, and pretty close records, in order to note so small a difference in production between the mothers and the daughters by the cross of this sire, but that is why that man has made a great and wonderful success, such as we all know he has made, simply through knowing what every sire he has used has accomplished with his herd, and whenever the result was not a profit, that sire was disposed of at once.

So much for records of production.

Now, I believe that along with the records of production we should keep records of feeding, that is, as largely as we can. It probably is more difficult, or a little more expensive to keep feeding records than it is milk records, but still, as far as we can, we should keep feeding records of our animals, realizing that the cow which makes us $35 worth of milk and butterfat and solids-not-fat in the year and consumes only $25 worth of
feed is more valuable to us than another cow which produces the same amount of milk and butterfat and solids-not-fat and does it on a larger amount of feed.

There is another value to be realized if we look at this matter from another standpoint, this matter of making records in our herds, and that is this: I am sure that through the mere making of these records we develop our cows, if we feed intelligently, not overfeed and not underfeed but feed the cow that which she should have to stimulate her to do the very greatest and best amount of work that she is capable of doing. I am sure we develop the cow in the same manner as we do working horses for work, or those bred for speed purposes when we develop them to work or make speed records. So that is something for us to give our consideration to and think about.

I believe that we have had in this country a great many cows capable of making large records, as large even as some of our better cows have made, and the reason they have not made these records or shown that they had the ability to make such records, was because they were not cared for and crowded along and led up to the point where it was possible to develop them and make the records which were later made by other cows.

Breeding records, undoubtedly should be kept, because often times we find individuals capable of making large records in the way of milk and butterfat production that do not reproduce themselves or their characteristics in their offspring, and then of course the real value of these animals lasts only for the one generation and their blood is not carried forward or they are not made a fountain head of a family of great producers. So we should watch and keep records, not only of what individuals do, but also of the other individuals of the same family.

Then another point which we are too prone to overlook, is to determine what the sires used in our herds are really doing for us. I am sure there are many cases, in fact, I have known a great many examples where most excellent sires have been disposed of, in fact, have been slaughtered and gotten rid of before their real value could be determined.

I remember some four or five years ago when I was down in Massachusetts talking to Mr. Julian Hood. He told me that one time his uncle sent him to Connecticut to buy some cows. He bought quite a number, brought them home and began to
milk them, and without exception they are phenomenal cows. His uncle said to him, "You better go back and find out where these cows came from, what their ancestry is, how they happened." So he went back and began inquiring and he found that these cows without exception were daughters of Sophia's Tormentor, and he came back and reported to his uncle. His uncle said, "You go back and buy Sophia's Tormentor, it doesn't make any difference what you have to pay for him. We want him." When he went back, he found they had sold him, but he followed him up, followed him up to another place, and got there just the next day after that poor old bull had been slaughtered. Now, one of those cows in that lot was Marna and she was the only cow that ever defeated Figgis in the show yard, the cow that made a record of something like 675 pounds of butter in her eleventh year and won the grand championship prize at the St. Louis Exposition when thirteen years old. I could tell you many instances of that nature, of just such sires that have been lost because of the fact that one breeder after using him for a time, got rid of him, and he got out of his reach before his real value had been learned. I believe every one of us should take extreme pains never to let the sire we have used get out of our sight until we have fully determined whether he was valuable by the performance of his daughters and whenever in that way we locate a sire that is producing wonderful daughters for our herd, then the thing to do is to keep him his lifetime. It is very seldom that we find a breeder who is fortunate enough to get even one sire that is capable of making him famous, so that we should not run the risk of sacrificing any of our sires until we know whether or not he is a sire that is capable of making us famous.

There is just one more point that I wish to dwell upon briefly, and that is show yard records.

I believe there is value in show yard records, even for dairy cattle. As I said before, I believe there is more value perhaps in milk and butter records, but even at that I am certain there is something to be gained by the breeder of dairy cattle from the show yards. In the first place it fixes the type, it fixes uniformity and it fixes the type of form and conformation which we wish to breed to and as has been demonstrated by Colantha 4th's Johanna, Jacoba Irene, Dolly Dimple and Rena Ross and all
famous cows. A cow does not have to be broken backed or have a tilted udder or a lot of other such unsightly faults in order to make a big record.

Last year at the National Dairy Show I asked the judge of the Jerseys, "Suppose Jacoba Irene was led along in the ring of your show cows and had not received the accident of knocking her hip out of shape, what could you do with her?"

He said, "What could I do with her? A cow with such individuality, such form, I could do nothing but put her clear to the top." These cows that have made phenomenal records conform to types which we desire in the show ring, undoubtedly they would be recognized by expert judges. There is value in show yard records that are realized when we consider the great advantages the beef breeder has had over the dairy breeder through the publicity he has made with his animals, and the advertising he has gained, because his animals have been shown in their best form to the farmers of the country and consequently they have favored beef cattle rather than dairy cattle.

Many of you probably have read of the fact that nobody should buy even a beef bull that was too fat; they should be bought in poor condition rather than fat; but I want to tell you I never in my life saw a buyer of beef cattle—and I have had a good deal of experience in that respect. I have seen a great many expert breeders of cattle select and buy bulls to put at the head of their herds, but I have yet to see the man who would go and buy a sire or a bull that was too poor in flesh, even though he himself had talked hour after hour telling the other fellow not to buy a sire that was fat. Why does he do that? Because, when he sees the two animals together, the one in good flesh and the other not, he is displeased with the one and pleased with the appearance of the other, and consequently he selects the fatter beast, and that is exactly what you will find all human nature doing. If you take two cows and put them side by side, both of them equally good from the standpoint of milk and butterfat records, you will find that the man who is going to buy one of them will always choose even at a higher price the animal which has the appearance of beauty as well as utility. So therein undoubtedly lies the value of show yard records as well as any other.
In conclusion and summing up, I am sure that invaluable are records of all kinds in breeding and developing dairy cattle. The breeder who pays no attention to records will have just as hard a time to make the greatest success out of his breeding operations as he would have in trying to sail across the Atlantic ocean in a ship without a rudder.

DISCUSSION.

Mr. Phillips: Do you suppose the man that sold Yeksa Sunbeam at Minneapolis for $40 or $50 had ever weighed her milk?
Mr. Van Pelt: No, he certainly had not—he might have weighed her milk, but he had not tested it.
Mr. Phillips: Don’t you suppose that that friend of yours, who got on so well after he got married, was successful in reaching a profit of $36 because his wife helped him milk?
Mr. Van Pelt: I don’t know whether she ever milked or not. I presume that is true, though.

GROWING CORN FOR MILK PRODUCTION.

C. P. Bull, Minnesota Experiment Station, St. Anthony Park.

Mr. President, Ladies and Gentlemen: In our agricultural statistics we have been gathering in connection with different topics that have to do with farmers in our state, we found that stockmen are the most intelligent class of farmers and we have also found that the dairymen are as a rule a little more onto their job than the other classes of stockmen.

The prosperity of a business lies primarily in the cost of production and the net profits. Now, in getting these net profits we must consider the cost of the production.

I want to quote here just briefly from Bulletin No. 48, Bureau of Statistics in the United States Department of Agriculture