

THE TWENTY-FOURTH ANNUAL MEETING  
OF THE  
IOWA IMPROVED  
Stock Breeders' Association,

HELD AT  
WEST LIBERTY, IOWA.

DECEMBER 8 AND 9, 1897.

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OFFICERS:

President—J. W. BLACKFORD, Bonaparte; Vice-Presidents—JOHN COWKIE, South  
AMASA; J. P. MARATREY, Fairfeld; RICHARD BAKER, Farley; PROF. G. F. CUB-  
TIS, Ames; J. H. GRENHOLDT, Cedar Falls; DAN LEONARD, Leonard; P.  
G. HENDERSON, Central City; J. CHESWELL, Bonaparte; J. H.  
CRAWFORD, Newton; Secretary and Treasurer—W. M.  
McFADDEN, West Liberty.

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IOWA IMPROVED STOCK BREEDERS' ASSOCIATION.

SECRETARY'S REPORT.

*To His Excellency, Hon. Leslie M. Shaw, Governor of Iowa:*

In compliance with the provisions of the statute I have the honor to render a stenographic report of the proceedings of the last meeting held in West Liberty, Iowa, December 8-9, 1897.

W. M. McFADDEN,  
*Secretary.*

OFFICERS FOR 1898.

PRESIDENT.

John Cowrie.....South Amana

VICE-PRESIDENTS.

W. P. Young.....Mt. Pleasant  
W. W. McClung.....Waterloo  
John A. Evans.....West Liberty  
Dan Sheehan.....Osage  
Andrew Davidson.....Monticello  
J. R. Crawford.....Newton  
Prof. C. F. Curtis.....Ames  
Dan Leonard.....Leonard  
Geo. W. Franklin.....Atlantic  
R. J. Johnston.....Humboldt  
H. G. McMillan.....Rock Rapids

SECRETARY AND TREASURER.

W. M. McFadden.....West Liberty

The next place of meeting will be at Iowa City, beginning  
December 14, 1898.

## MEMBERS.

S. Sacket	Fairfield
G. W. Phillips	West Liberty
W. W. McClung	Waterloo
R. J. Johnston	Humboldt
John A. Evans	West Liberty
Jas. Hill	Libertyville
R. W. Lamson	Fairfield
J. P. Manatrey	Fairfield
H. M. Wentworth	State Center
W. P. Young	Mt. Pleasant
W. O. Fritchman	Muscatine
J. A. Hamilton	Kirkville
L. H. White	Martinsburg
W. A. Bryan	New Sharon
C. F. Curtiss	Ames
A. Moffitt	Mechanicsville
W. C. Evans	West Liberty
J. W. Reeves	West Liberty
J. G. Brown	Solon
B. L. Wood	Springdale
L. O. Mosher	West Liberty
Wallaces' Farmer	Des Moines
J. W. Blackford	Bossarte
B. R. Vale	Bonaparte
John Gibson	West Liberty
Thos. Boot	Wilton
Thos. Birkett	West Liberty
John Cowrie	South Amans
P. N. Schooley	West Liberty
T. J. Harris	West Liberty
F. M. Warren	West Liberty
E. F. Brockway	Iowa City
W. M. Pownall	Centerdale
Jeff. Sanders	West Liberty
A. Crawford	Lone Tree
Lewis Fiderlein	West Liberty
L. A. McKee	West Liberty
Geo. H. Dunkelberg	Rockford

R. H. Thompson	Iowa City
J. W. Slemmons	Iowa City
E. C. Holland	Milton
A. H. McClun	West Liberty
T. R. Wilson	Morning Sun
J. M. Erlon	Mt. Vernon
J. R. Crawford & Sons	Newton
Horace Sanders	Iowa City
H. I. Davis	Grinnell
Geo. Vanatta	West Liberty
W. L. Brooke	West Liberty
Z. Ellyson	West Liberty
Jont Maxon	West Liberty
J. C. Hall	West Liberty
Jordae & Dunn	Central City
P. G. Henderson	Central City
Gad James	West Liberty
E. C. Bennett	Tripoli
W. W. Vaughn	Marion
G. H. Burge	Mt. Vernon
W. A. Hall	Anamosa
Matt Wilson	West Liberty
G. W. McFadden	West Liberty
Louis Stoltenberg	Amity
Cookson Bros.	Downey
W. M. Lambing	West Liberty
J. P. Nichols	West Liberty
Chas. Wolf	West Liberty
Clark Nichols	West Liberty
R. C. Wagner	West Liberty
Griff Johnson	Wilton
P. B. Turkle	West Liberty
Carcy Jones	Des Moines
M. Burge	River Junction
W. M. McFadden	West Liberty
C. Murdock	Waterloo
J. C. Martin	West Liberty
Thos. Grey	West Liberty
J. E. Grey	Columbus Junction
A. H. Floyd	West Liberty
J. T. Brooks	Hedrick
B. A. Nichols	West Liberty
Albert Whitacre	West Liberty
Alvah Hardy	Riverside
C. W. Norton	Wilton
C. S. Barclay	West Liberty
Bert Lambing	West Liberty
S. G. Hogue	West Liberty
A. C. Whitacre	West Liberty
J. H. Deemer	Des Moines

Thayer & Walpole.....	Rock Valley
C. E. Negus.....	Springdale
C. C. Shafer.....	Hampton
W. A. McDonald.....	Wellman
Euclid Sanders.....	Iowa City
S. M. Hoskins.....	Muscatine
Albert Harrah.....	Newton
J. A. Craig.....	Ames
P. L. Fowler.....	Des Moines
J. I. Nichols.....	West Liberty
Henry Mosher.....	West Liberty
Ell Elliott.....	West Liberty
Norris Wilson.....	West Liberty
Ernest Mosher.....	West Liberty
H. L. Mosher.....	West Liberty
I. T. Cox.....	West Liberty
D. L. Dawdy.....	Abingdon, Ill.
Geo. D. Harrah.....	Newton
Ira Hendricks.....	Letts
J. C. Shrader.....	Iowa City
W. F. Harriman.....	Hampton
G. F. Borland.....	Iowa City
S. G. McPadden.....	West Liberty
F. N. Chase.....	Cedar Falls
A. J. Esser.....	Rockford
J. H. Gerholdt.....	Cedar Falls
J. T. Kinmonth.....	Columbus City
E. S. Evans.....	West Liberty

## THE CONSTITUTION.

## ARTICLE I.

This association shall be known as the IOWA IMPROVED STOCK BREEDERS' ASSOCIATION.

## ARTICLE II.

The objects of this association are to increase the excellency and to provide for the preservation and dissemination in their purity of the different breeds of improved stock of all kinds.

## ARTICLE III.

Any person who is a citizen of Iowa and a breeder or owner of fine stock may become a member of this association by paying a fee of \$1 annually, and signing the constitution or empowering the secretary to write his name thereon.

## ARTICLE IV.

The officers of this association shall be a president, five vice-presidents to represent the different branches of stock breeding, and a secretary and treasurer, and these seven shall constitute an executive committee, of whom a majority shall be a quorum for the transaction of business, and the duties of these several officers shall be the ordinary duties of such officers in like associations.

## ARTICLE V.

The annual meeting of this association shall be held on the second Wednesday in December of each year, at which time all officers shall be elected by ballot, and they shall hold their offices until their successors are elected and qualified.

## ARTICLE VI.

This association at any annual meeting may make amendments to this constitution, may adopt by-laws, may fix an annual fee of membership, and may do any other business not inconsistent with the purposes of this association; provided that amendments to this constitution must receive a two-thirds vote of all members present.

[The above is the amended constitution. The number of vice-presidents have, by the custom of committees, been changed from five to one from each congressional district.]

## SPECIAL MEETING.

A special meeting of the members of the Iowa Improved Stock Breeders' association was held on call of Secretary Murdock, at the Iowa state fair grounds, Wednesday evening, September 15th, to take action in regard to the resignation of Mr. Murdock, owing to his removal from the state.

Meeting was called to order by vice-president Cowaie.

Resignation of Secretary and Treasurer C. Murdock was formally presented and accepted.

On motion, W. M. McFadden of West Liberty was chosen to fill the unexpired term of secretary and treasurer, after which the meeting adjourned.

C. MURDOCK,  
*Secretary.*

## PROGRAM.

## WEDNESDAY AFTERNOON, DECEMBER 6TH.

1.00 o'clock.

Prayer by Rev. I. B. Schreckengast.

Music.

Address of Welcome, by Mayor A. H. McClus, of West Liberty.

Response, by E. C. Bennett, of Tripoli.

Address of President, J. W. Blackford, Bonaparte.

Appointment of Committees.

Swine Breeding; Its Relation to Agriculture, J. M. Erion, Mt. Vernon.

Discussion.

The Horse for an Iowa Farmer, W. M. Pownall, Centerdale.

Discussion.

What is Required of the Breeders of Pure Bred Stock, C. Murdock, Slayton, Minn.

Discussion.

Adjournment.

## EVENING SESSION.

7:30 o'clock.

Music.

Corn and Its Cultivation, John Cownie, South Amana.

Discussion.

A Just Decision, Mrs. R. J. Johnston.

The Milk and Butter Side of the Cattle Business, A. M. Caldwell, New Holland, Ill.

Discussion.

## THURSDAY MORNING, DECEMBER 9TH.

9:00 o'clock.

Music.

Lessons of the Dry Years in Relation to our Grasses and Pastures, Henry Wallace, Des Moines.

Discussion.

Sheep and Their Future in Iowa, H. Richards, Cotter.

Discussion.

Some Needed Reforms at our State Fairs, A. J. Lovejoy, Recco, Ill.

Discussion.

The Department of Agriculture, Hon. James Wilson, Washington, D. C.

Discussion.

Adjournment.

## THURSDAY AFTERNOON.

1:00 o'clock.

Music.

Reports of Committees.

Report of Secretary and Treasurer.

Economy in Feeding the Products of the Farm, Prof. W. A. Henry, Madison, Wis.

Discussion.

The Duties of the State and National Government in Respect to Diseases of Live Stock, Dr. J. C. Shrader, Iowa City.

Discussion.

Adjourn at 3:30 to the heated Sale Pavilion on the fair grounds where there will be given an illustrated lecture and school of instruction in judging points of excellence in beef cattle, by Prof. C. F. Curtiss, Ames.

## INTRODUCTION.

When the twenty fourth annual meeting of the Iowa Improved Stock Breeders' association was located at West Liberty it was hoped that a meeting of the association in this historic live stock center would be one of the most interesting held for a number of years and serve to add new life and give increased interest to the proceedings of the association. The result of the meeting held December 8th and 9th certainly justified all expectations. Not only was the attendance larger than for a number of years past, both locally and from a distance, but the interest awakened was greater than the association had known for some time. A part of this was, of course, due to the brighter prospects of stock men generally, but most of it was the result of the general expectations of an interesting meeting by the members. The person who attended the last meeting and was disappointed, failed to make his report. The effect on future meetings will certainly be noticeable for some time to come.

The next meeting will be held at Iowa City, beginning the second Tuesday in December. This is a very convenient point to reach, located on the main line of the Chicago, Rock Island & Pacific railway, and a branch of the Burlington, Cedar Rapids & Northern railway.

The importance of this organization to the live stock interests of the state is recognized by all, and it is hoped that the increased interest will continue to grow so that the usefulness and importance of the Iowa Improved Stock Breeders' association may be extended to every county in the state.

## TWENTY-FOURTH ANNUAL CONVENTION OF THE IOWA IMPROVED STOCK BREEDERS' ASSOCIATION.

The twenty-fourth annual convention of the Iowa Improved Stock Breeders' association convened in the opera house, at West Liberty, Iowa, Wednesday, December 8, 1897, at 1:30 P. M.

The association was called to order by its president, J. W. Blackford, of Bonaparte.

Prayer, by Rev. I. B. Schreckengast.

Music by mandolin club.

CHAIRMAN: The first thing on the program is an address of welcome by Mayor McClun, of West Liberty.

Mayor McClun addressed the association as follows:

*Mr. President and Gentlemen of the Iowa Improved Stock Breeders Association:*

We feel greatly honored in that the leading breeders' association of the foremost agricultural and live stock state of the union has chosen our city in which to hold an annual meeting. And upon behalf of the citizens of West Liberty, and also upon behalf of the fine stock breeders of this vicinity, who are associated with us in your entertainment, I thank you for the compliment of this visit, and take great pleasure in welcoming you to our city.

For over a quarter of a century West Liberty has been very prominently identified with fine stock interests, and we are, perhaps, better known and advertised through this medium than any other.

Our reputation as a fine stock center was established in the palmy days of the Shorthorn industry, and especially by those early, great public sales of Shorthorn cattle held here, which attracted the attention of stock breeders and the people generally all over the land, because of the great numbers that were disposed of, and because of the large and sometimes sensational prices that were then realized, and also because of the hospitality with which they were conducted, coming as they sometimes did, in series, lasting several days, and free entertainment being furnished during the entire time to all the hundreds of people who came to attend them.

I wish it was possible to go into statistics, and show, for a series of years, how many thousand of thoroughbred cattle have been bred here, and sold

privately and through the medium of the public sale, and to show how many other thousands upon thousands of thoroughbred and high grade have gone from here to the great western ranches. And I wish it was possible to follow all these and show what a factor they have been in the great revolution and improvement that has been made in the general quality of the cattle of the country. It would be a record that our breeders would have good reason to be proud of.

But our reputation has not been dependent upon the cattle industry alone, for stock breeding, like farming, has been progressive and diversified. And while this early reputation as to cattle has been well maintained, there has been added the breeding of all other classes of farm live stock.

In horses we have had both the trotting and the draft breeds largely represented, and there have been very many individual animals, whose reputation as sires and performers have gone far abroad, bringing a market for their descendants. And while the horse industry has, because of bicycles, electric railways and other reasons, suffered the greatest depression it has ever known, in the face of all this, sales have been fairly good. The proprietor of one of our stables has informed me that there has been shipped, through his barn this year, an average of a car load per week, or an aggregate of 1,000 head. Adding the shipments from the other stables, we can estimate that between 1,200 and 1,500 horses have gone from here in 1897, and the business of this year is but an average with previous years.

We can say but little for the sheep industry. You are all aware of what breeders of these have had to contend with and the reasons why. But we can say this, that the future outlook for sheep breeding is very promising, and that our people are getting ready to take the benefit of it. Several fine breeding flocks are again established.

The exhibit of poultry at our last Union district agricultural fair astonished our own people, indicating that this industry far exceeded our own ideas of it. The superintendent of this department has informed me that there were five hundred fowls and twenty-five or thirty varieties on exhibition. It was the largest and finest exhibit ever made here, and attracted more attention than any other department of the fair. These exhibits were a good index of the interest in poultry breeding.

The Poland China hog industry has of late years led, and far exceeded, all others. As in the cattle industry, it is not possible to give statistics or estimates covering the volume of this business. In this we claim to be the "hub," around which all this western business revolves.

Some of the most noted herds and individuals of this breed are owned here.

The office and the secretary of the Poland China Record association have for years been located here. It is not possible to give you the number of people in this vicinity engaged in this business, or any idea of the number of public sales in a year. But I have often thought that while these numerous public sales dispose of such great numbers, they represent but a small part of the business, for you can at all times find upon our depot platforms hogs crated for shipment by freight and express. One result of this business has been that upon all the farms in a wide extent of country surrounding us, the entire hog product, if not recordable, is practically thoroughbred. The whole of these industries combined make fine stock breeding a leading

or principal industry, and it is our boast that we have within a small radius of West Liberty, more people engaged in fine stock breeding than any equal portion of the Hawkeye state, or the entire west. And it makes this an ideal place for a meeting of the Iowa Improved Stock Breeders' association.

You should find amidst the legion of stock breeders here congenial companionship, and I know they will be on hand and join us of the city in trying to make this twenty-fourth annual session one of the most interesting and successful in the history of your society.

One year ago, when discussing the question of extending you an invitation to visit us this year, I remember that one of your members residing here, stated that of late years there had been a lack of interest and a falling off in attendance at these annual meetings. But, said he, if we can induce them to come to West Liberty, we can have an old-fashioned revival, create enthusiasm, add to our membership, and take a new lease of life. You have accepted our invitation, and we are glad to know that everything points to the gentleman's prediction coming true.

While we boast of the fine stock industries that surround us, and with good reason to do so, there are other things associated with our little city that we are equally proud of, and we call your attention to our railway facilities, our healthful location, our splendid water system, our handsome churches, our modern schools, our many beautiful residences, our fine business buildings and the large and classified stocks of merchandise they contain. And that we also have as citizens an exceedingly enterprising, hospitable and generous people. And speaking for them I again extend to the Iowa Improved Stock Breeders' association a hearty welcome, and trust that you will have reason to bear away with you pleasant recollections of West Liberty.

CHAIRMAN: Response by E. C. Bennett of Tripoli.

Mr. Bennett responded as follows:

That address of welcome was unequalled for its modesty and appropriateness. The reference to the live stock interests of West Liberty and vicinity we understand very well and we know that these achievements have not come by chance. There has been brain power used to bring about these results. It is pleasant to be welcomed by those who have shown this brain power and its results in agriculture. This association is a brainy one and represents all that is best along that line in regard to agriculture and the live stock interests. I notice that Professor Henry of Wisconsin, is to be here and address the association on the subject, "Economy in Feeding the Products of the Farm," which shows that firstly and lastly and wholly the Iowa Stock Breeders' association looks to brains. Not one who can simply talk, but one who can tell us in simple language what to do and the best methods to pursue in order to produce the most satisfactory results. The president of the United States came to this association and took one of our brainy members and placed him in his cabinet. Not on account of his beauty, not on account of anything but his brain power—the brain power that I have previously mentioned, which the members of this association are noted for. The greatest fault with our secretary of agriculture is that he was unfortunately born on the other side of the ocean and consequently



can never be president of the United States. We of the rank and file are the ones by whom this association will be measured. We must use this brain power I have referred to. We may commit sins of omission and commission, but that will be pardonable. We all have our own ideas. We meet here to compare them. So I repeat we are glad to meet here in this live stock center and to accept the hospitality of these breeders who have shown their ability along the line of the work of this association. I see by reference to the program that we are to have a banquet on to-morrow evening. I can assure you that at that time we can show you our appreciation by our appetites. You have taken us in very handsomely. We will take you in with equal grace and satisfaction.

**SECRETARY:** The next on the program is the annual address by our president.

*Gentlemen of the Iowa Improved Stock Breeders' Association:*

It is with pleasure that I welcome you to the twenty-fourth annual meeting. Being held as it is in this, one of Iowa's great centers of improved stock, we anticipate and confidently expect to have one of the most successful meetings in its history.

Let us sound the slogan here so that the farmers of Iowa cannot but know that the improved stockmen are on the war path, and that the scrub and scrub farmer must go.

Gentlemen, the past year has been a notable one, an historical one, I might say, for when the complete history of the times shall have been written, the year 1897 will go down as one of the great focal points of the industrial record of America; marking as it does the depths of our recent terrible paralysis of business and financial depression, it also marks the beginning of the recovery. The down grade has been passed, we have stood hesitatingly, almost despairingly, at the bottom, but now with all brakes off and every shoulder to the wheel we are slowly but surely pushing back up the hill to prosperity.

At dawn, when the worst is over, we farmers and stockmen can congratulate ourselves, for, in my opinion, we did not experience the hardship of the times as some other classes of our citizens, and yet, while we did not feel the worst of the disaster, we rejoice with all that the crisis is past and a new era arrived, and while a new administration has assumed control of material affairs, we feel that it has especially honored itself and honored this association in its wise and judicious selection of one of its pioneer members to a position second to none in his cabinet and in its importance to the agricultural and live stock interests of the nation, whose industry, capability and efficiency along the line for which he was selected stands without a parallel—the Hon. James Wilson, of Iowa.

At one of our annual meetings some years ago the following resolution was adopted: "That the royal road to agricultural greatness in Iowa in the future, as in the past, lies through wider and better pastures and heavier corn crops, condensed into better beef and pork and finer butter and cheese by the best breeds of stock that can be produced by the breeders' art."

This is just as true to-day as it was years ago, and yet how many farmers fail to realize it. We often hear about one-horse lawyers and doctors, but is it not a fact that we still have one-horse farmers, and plug horse at that?

The time has long since gone by when even the fertile fields of Iowa can be tillied profitably for grain alone or when the harvest should be wasted by raising scrub animals. Talk about leaks on the farm. The greatest leak that can be conceived is that of grass and grain going down the throats of unimproved stock.

Our association was founded primarily for the purpose of stopping this leak, and there can be no doubt but that it has accomplished much in the way of teaching our farmers advanced ideas of stock raising, but much yet remains undone along this line; but we must press onward, remembering that nothing but the best is good enough for the Iowa farmer.

The heavy draft and the spirited road horse of to-day were not a common sight in the 70's, when this association was formed; but still the same old plug is used, and not only used but still raised on some of our farms. To be sure the horseman has had very discouraging times in recent years, but I believe that the future will bring its reward. I need but point to the late Chicago horse show as an evidence of an upward turn, for it is not probable that horsemen would have made such an exhibition had they not seen encouragement in the near future. The record of the speed horse too, in the past year, has shown improvement, in that Star Pointer reeled off his mile in less than two minutes, and the horse of the turf is in his glory, in that he has accomplished that which he was heading for, a mile in two minutes.

We may learn a valuable lesson from these speed men: Set your mark, have your ideal, and with it always a view; breed and train toward that end and though you may not always accomplish it in a year or two, you will gradually approach that ideal and will in the end reap your reward. While horsemen are rather discouraged, cattlemen are rejoicing. Nothing will take the chills off the early morning chores, this winter, as the contemplation of those blooded calves and yearlings that are growing into money, good honest gold money, if you please. When a man can ship twelve or thirteen-hundred-pound yearlings and two-year-old steers to Chicago and get 5 cents and upwards, from Iowa feed lots this fall, that man has no cause of complaint, even if corn is only 20 cents and oats hardly worth the raising, but in order to do that the farmer must have improved cattle of the very best breeds, and let that be the best of its kind.

There is one feature of the cattle business that bodes no good to the Iowa cattle raiser and feeder, namely: annually for years, our best bulls are shipped by the carload to the western range and Texas, hundreds of which ought to remain in every county in Iowa to improve our own stock.

Iowa farmers, wake up! Those range men are more fully awake and have learned the value of using pure bred bulls to such an extent that their cattle are already outselling on the market, our home raised and fed stock, and feeders are compelled to seek the western and Texas ranges to fill up their feed lots, such is the growing scarcity of good feeding cattle at home, as the result of using bulls that should have been killed ere they were born.

Dairying should prove profitable with effective laws against oleomargarine and with a secretary of agriculture doing his utmost to introduce our excellent dairy products into European markets.

The sheep industry, which for several years was in a languishing condition, flocks reduced or entirely decimated in consequence thereof, has

taken on new life, and sheep and shepherd can look you squarely in the face and say I am strictly in it, and the cry of free wool has gone with the sad remembrances of the past.

But how about the hog? The cholera is still after him and, sad to say, gets him every time, regardless of breed or condition. Must the swine grower forever grope in the dark? Is there no panacea? No balm in Gilead? And the sad refrain is wafted back, none.

In probably no other branch of his live stock is the average farmer so well improved as in the hog, and yet it is a question whether this so-called improvement has not proceeded too far. We would hate to say that progress is not progress, and yet the question may be asked: Is not our hog improved too much in the direction of the lard hog? Would it not be better if we were nearer the type of the bacon animal?

To be sure the lard hog is no doubt the product of his environment, namely, the corn crib; but could not the type be changed to advantage, and the environment accordingly modified? Corn will produce the lard hog, and are not our environments such that we cannot profitably produce the other? But, then again, can we afford to raise the lard hog in the numbers we have to force him on unwilling consumers?

Hoping that this intricate and other questions may be profitably solved, I leave the matter in the hands of the association.

R. J. JOHNSTON: I move that the president appoint three committees, one on nominations of officers, one on resolutions, and one on location.

Motion seconded and carried.

CHAIR: I would like time to make out these committees, and if there is no objection, I will appoint them at this evening's session.

We will now take up the regular program. The next is a paper by J. M. Erion, of Mt. Vernon.

#### SWINE BREEDING—ITS RELATION TO AGRICULTURE.

J. M. ERION, MT. VERNON.

It is doubtful whether the time ever existed when it could be consistently asserted that swine breeding and agriculture sustained to relationship to each other, but it can be truthfully said that there was a time when neither industry, and especially swine breeding, was operated on a sufficiently extensive scale to necessitate the recognition of any very material connection. It is a dead sure certainty, however, that taking into account the gigantic proportions assumed by both swine breeding and agriculture, the modern practices and achievements in each, that the two are now absolutely inseparable. Just at what date they entered into this permanent

connection, or even struck up the flirtation, resulting in courtship, finally terminating in this union, is to my mind a historical date that would be hard to accurately establish. Without making any special investigation in regard to the exact time or the tactics employed, the real incentive which actuated the consummation of such a relationship becomes once apparent, which was, to be happy and contented in life, the one must have the companionship of the other, and the other, to have some worthy object upon which to lavish its affections, and bestow its rich provisions, must be united to the one.

The question naturally propounds itself: Will the two ever be divorced or separated? Not while the present state of domestic felicity exists, even though severely ruffled as it may sometimes seem, will they be divorced and the vows have been sealed that nothing but death shall ever separate them.

Their very natures are such as to create and maintain an affinity so happily adapted to each other — in which the eternal fitness of things is so perfect that were either to be removed the one would certainly suffer severe loss while the other must inevitably perish.

Remove agriculture and swine breeding could not survive. Remove swine breeding and agriculture would lose one of the greatest, if not the greatest, source of profitable consumption.

The two are related the same as wheat growing and flouring mills. The one is dependent upon the other but the other is not entirely dependent upon the one.

The great and all absorbing problem remaining to be solved is how to operate and perpetuate the two in conjunction to the best possible advantage as regards profit in dollars and cents. To the man of ordinary, or even extraordinary, intelligence this has become a perplexing question, because, for agriculture there is positively no substitute, no alternative. For swine breeding, even with all the uncertainties and severe losses connected with it, there never has and never will be any industry instituted that can take its place.

Agriculture being the paramount industry in this great country of ours; the one upon which all others depend for support; the one great vocation upon which not only seventy millions of people depend for their bread and butter, but which has created the countless millions of worth in property, to say nothing of exports, is destined to go on and on through the ages to the end of time. Its abandonment is out of the question so long as the human race is left to live on the earth.

As intimated in the outset there may have been, and doubtless was, a time before the great west, or even what is known as the middle west, was settled up and developed into one of the most productive sections of the agricultural world, when agriculture was not so much in need of an alliance with live stock; but when this western domain, with its almost unlimited fertility, became occupied and began to develop, and agricultural products of all kinds became out of proportion to human population, agriculturists were forced to look for some profitable agency with which to convert their surplus products into cash and avoid selling raw materials on an oversupplied market. When this state of affairs began to materialize doubtless marks the beginning of the era when swine breeding began to be

extended; when the improvement of breeds began to claim men's attention, and which, through the generosity of agriculture in furnishing so great a variety of materials so admirably adapted to the end in view, has been so successfully accomplished.

In the course of this improvement of the stock, as well as of the men who handled it, together with the remunerative price received for the finished product, swine breeding became not only a fascinating but a highly profitable auxiliary to agriculture, and as a natural consequence this permanent relationship resulted. A misinterpretation of the term swine breeding would be a very easy mistake to make here.

I would hardly think it the intention of the originator of this subject to confine its meaning to the breeding of thoroughbred hogs for breeding purposes alone, yet that construction could be easily and properly put upon it by this assembly, who feel a justifiable pride in the distinction, "improved stock breeders."

Properly speaking, the breeders or specialists are all the swine breeders we have. To breed anything is to originate something new. That is the breeder's business. The farmer simply buys and perpetuates what the breeders originate and should be more properly called swine grower.

The swine industry has naturally divided itself into two classes, thoroughbred and pork producing.

While the thoroughbred business, as we have it at present, should be recognized as the mainspring of the great machine, pork production, by swine breeding we are expected to consider as meaning the propagation of all swine for all purposes.

Since we have, of necessity, the two classes, each being directly connected with agriculture and bearing such close relationship to each other, it seems necessary to make a compound subject out of it, and treat each class from its own peculiar standpoint.

In regard to the first, or thoroughbred, class a brief consideration of the proper use or true mission of the thoroughbred hog, together with some of the abuses and unbecoming features of the breeding business, would not be out of place. Upon this phase of the subject I can best and most quickly express my views with a short extract from a paper read before a farmers' institute a number of years ago, and which came to my notice but a few weeks since, on the patent side of a local paper. In the seven years that have elapsed since it was written, I can see no valid reason for changing my mind. It is as follows:

"If it were in my power to supplant, or rather eradicate, the scrub hogs used in pork production, and substitute some of the slipshod methods of breeding and feeding, with proper ones, I would soon have nothing but thoroughbred hogs in this entire country. Not moaning that all should be registered—that would be utter uselessness, but I mean that all stock should be directly traceable to recorded ancestry. Then let the registered herds be kept up to as high a standard of excellence as the breeder's skill and financial ability to maintain would justify, for the supplying of male heads for the pork herds. (During the seven years we have seen this feature of the plan make a very satisfactory growth.) This would increase the business of the professional breeder and put it on a paying basis, but would most likely increase the number of breeders to a point where the

scramble after a few dollars would knock the bottom out of the profitable side of the business. (That comes nearly being a correct seven-year-old prediction, for I am honest in the belief that farmers are getting good breeding stock cheaper to-day than they did when that article was written.) By this plan the farmer would be feeding his farm produce into a class of hogs that would be much more likely to net a profit, and command a premium on the market, whether high or low. At the same time he would have a class of stock that he could take infinite satisfaction in hanging on the fence to look at and show his neighbor for they always provoke favorable comment and admiration, which serves as an incentive for something just a little better for the next crop.

"I say that until the thoroughbred hog shall find a place on every farm, his true mission will not be fulfilled. Though firm in the thoroughbred faith as I am, I have little hope of ever seeing the scheme fully accomplished.

"Too great a diversity in human nature, too wide a range in disposition, too many scrub men, will prevent farmers from ever all standing on a level in any industry.

"However, the cause is advancing, thoroughbred hogs are spreading, and one fact is becoming well established, that when a man once gets a taste of thoroughbred blood, like the bull dog, he never lets loose except to get a better hold."

So much for the true mission of the thoroughbred hog.

The ultimatum or sole purpose of any and all swine found in the entire procession, with thoroughbred stock in the lead, the high grade as the next best resort, cross breeds as an experiment, and the razorback for laughing stock, and a sort of "fantastics" bringing up the rear—is the pork barrel and lard tub. Anything found in this procession that fails to travel at a profitable gait toward its final destination should be discarded, and its place filled with something that can keep up with the procession, for in these days of low prices nothing but the best nets a profit.

Sometimes we are almost forced to concede that the cotton seed vander has a harder cinch on the lard tub than the swine grower has, even with the best of stock, but thanks to the peculiarity of pork, no one has ever been able to counterfeit the meat. But what of the abuses and questionable features of the thoroughbred business?

There are some branches that have developed and borne fruit in very recent years that would bear mentioning, and admit of a gentle shake while passing, but I see a number of hornets' nests dangling from some of the branches which most people feel a little hesitancy in encountering publicly. If the nests were labeled the following would be a few of the most noticeable, mostly connected with the public sale system—bogus pedigrees, boom prices, flitious values, put up jobs, unlimited exaggeration or extravagant imitation of circus advertisements in writing up foot notes for catalogues, a strenuous effort in trying to convince the public that the stock to be sold at a coming sale is so exquisitely grand in quality and finish, so completely "out of sight" in breeding, that no mount has ever been able to send a balloon within a hundred miles of it; the entire offering on a certain occasion will be a whole grist of bargains so completely outstripping the Klondike regions in real value as to require the united efforts of five of the windiest

\$50 auctioneers in Christendom to persuade the buyers to pay ten times the worth of a little fine-boned, long-haired, 'coon-footed male pig that any one-per-cent auctioneer could get two prices for at an ordinary farm sale. [Cheers.]

Just how the cause is to be benefited, or how the breeding stock of the country is to be improved, or what advantage the general swine grower is to receive from such maneuvers is not exactly as plain as the nose on a man's face to a great many people who are considered as having fair ability to see as far through a grind-stone in other matters as anybody. Fortunately they attract but little attention outside a small sphere in which they are operated, and have no effect whatever in pork-producing circles because of other factors of more importance, that present a much stronger semblance of reality and less of inflation, which interest the swine grower, to whom we now turn our attention.

In the past few years, through the efforts of the numerous swine journals and their contributors, who are capable of imparting valuable information to the farmer in regard to the fundamental principles in swine growing—such as the selection of breeding stock, proper mating, suitable rations and comfortable accommodations, etc., we can safely say that the intelligence of the general run of pork producers has been raised to quite a satisfactory standard. In fact, many of them have become experts in the matter of selection and mating, and are what might be termed scientific feeders.

They have learned from reading and experience the feeding value of their farm products, and can put up a ration that will make a hog out of a pig as quickly as anybody.

If they were allowed to go on without restraint or hindrance, keeping up with the improvement of the breeds and methods of treatment, with almost unlimited supplies of agricultural products at their command, it would indeed require an intellectual giant to predict with any degree of accuracy where he would round up.

Judging from past experiences there need be no great apprehensions about the climax being reached at any very early date, for when the one great destroyer—disease—makes his appearance, takes hold of the reins, makes a raid on a herd, the roundup is more easily predicted.

The owner's intelligence on any and all branches of swine growing seems to be as utterly useless, so far as saving life is concerned, as though he had never acquired it. The past two years have fully demonstrated the fact that swine growers, as well as the breeders, stand on extremely slippery ground.

They have learned to count nothing on the hog crop until they are on the scales.

And be it said, to the discredit of American hog raisers, thousands of hogs have even reached the scales that never got off in a sound state of health, yet that resort seems as natural as for the drowning man to grab at a straw.

Many a man has this very day burned or buried not only the results of this year's careful breeding, careful feeding and the observance of all the precautions one could employ to avoid or baffle disease; but the results of his intelligence as a breeder, his science as a feeder, his skill as a sanitarian, as well as the products of his farm, the fruits of his own hard labor, so far as they have been consumed, have gone down with the hog crop to ashes or

the grave. The more perfect the precaution taken, the more searching the investigation made, the more perservering the attempts at arresting the disease, the more deadly and uncontrollable it appears to be. In the light of these facts, what the future has in store for swine breeding is a problem that is puzzling the brains of thousands of men. It has puzzled mine, as it has yours.

If any other class of live stock could take the place of hogs a change that might furnish relief could be made, but there is not. Beef can never take the place of pork. Other meats are only side dishes. As a food staple pork cannot be duplicated.

As a farm animal for the consumption of agricultural products, as regards the time required to produce a crop, the capacity of consumption, and profit, when disposed of at a fair price, no animal under the shining sun can equal, or even approach the well-bred, well-fed hog.

CHAIR: The paper is now open for discussion.

RICHARD BAKER: I can tell my experience if it is of any value to this association. We have had to do with hogs that earn their living by running with cattle, and gave them no other feed, and they never died until killed. There is one feature in the case we must admit. The fat state is not a healthy one, and the trouble is we attempt to beat every one else's record in the matter of weight. I used to feed high and lost hogs, and since I have quit that and made them earn their own living, I have never lost a single hog. We always should have correct sanitary conditions in the pen. We should pay as much attention to these things as we would to the sanitary conditions about the house in which we live. If we would look after these matters properly, we will not lose a single hog. When hogs can have clean feed and exercise, they will keep healthy.

L. J. WATSON: One cholera germ will knock all that theory out of that gentleman.

J. M. ERION: In regard to Mr. Baker's statement about sanitary conditions, I want to say, that I had a dose of the cholera in my herd last year, and I will have to dispute his statement that cholera is produced by impure water and filth. At the time that the disease broke out, I know that there was not or had not been any refuse matter of any kind about my premises, and my hogs always had access to the water from a sulphur spring; still, at the same time, I lost the best crop of pigs that I ever raised. I am sure the disease did not and could not have come from bad sanitary conditions.

CHAIR: This subject of disease among live stock comes up for discussion to-morrow and I do not believe it a good idea to anticipate in the way we are doing.

L. J. WATSON: I am satisfied that one of the many reasons for the spread of cholera is the stock cars traveling through the country that are not properly disinfected. If this matter could be looked after as it should be we would have much less cholera to contend with. I know of an instance a few miles below here where a stock buyer went into a drove of hogs and in a few days the disease broke out and several thousand hogs have died since in that vicinity from the one infection. No matter how good the sanitary conditions are, if a cholera germ is brought on your place you will have cholera anyway.

HENRY WALLACE: That paper was quite a valuable one. I think however that Friend Baker has drawn the case a little too strongly. Over a large portion of the United States the hog is used for a scavenger. Take it east of Ohio, where farming is well done, the hog is used simply to pick up the refuse, and they are fed on dish water and waste of the kitchen, and with only a few bushels of corn to finish them off. In these places disease among hogs is comparatively unknown. But cholera begins when we go into the region of cheap corn, where hogs are raised in large numbers as condensers of corn. As we begin to increase in numbers we invite disease, and it seems probable that unless we limit hog production we will be compelled to, sooner or later. We ought to raise fewer hogs and more sheep. It seems foolish that the great state of Iowa should devote its energies to the production of a crop of grain which we dispose of at a loss by feeding to a class of stock that is liable to disease and total loss, when it might be fed to other stock at a profit.

JOHN COWNIE: While this subject of hog cholera is not properly before this meeting, with your permission I would like to give you a cure for this disease. Mr. Wallace and I made some experiments this fall. The experiments were successful, but the hogs all died. That was the unfortunate part of it. Since then I have had a vast amount of correspondence, not only from parties in Iowa but from the Atlantic to the Pacific ocean, and nearly every letter contained a specific that would cure hog cholera and all the ills to which the hog is subject. When I got my mail this morning, I found a letter in the post-office which had a sure cure in it and which is a fair sample of the letters received by me every day. With your permission I will read it to you.

## NO CURE FOR HOG CHOLERA.

JOHN COWNIE OF IOWA AGRICULTURAL SOCIETY SAYS PIG CROPS WILL BE SHORT THIS YEAR.

DES MOINES, October 12.

"John Cownie, Vice-President of the State Agricultural society, who made a series of test cures of hog cholera, says all are failures; that he expects to find no cure, and that the disease which carried off \$15,000,000 worth of hogs last year is not cholera at all, but typhoid pneumonia.

"He says the pig crop this spring fell far short of the previous year's, and that cholera promises to be worse this fall than ever before.

"He thinks the loss to Iowa farmers this year will be as large as previous years, and predicts an advance in the price of pork."

OMAHA, Neb., December 6, 1897.

John Cownie, South Amara, Iowa:

DEAR SIR—The above clipping from a Chicago paper was called to the attention of the writer hereof some time since, and from it I conclude that you have given some attention to what is generally called hog cholera, its causes, treatment, etc. The Sovereign Chemical Co. is now manufacturing a remedy known as "The Sovereign Hog Cholera Cure," which our experience justifies us in saying is the best remedy ever discovered for this much dreaded disease. I note that your opinion is that the disease prevailing in your state is not cholera at all, but is something in the nature of typhoid pneumonia. We have come to the conclusion that the term "hog cholera" as applied to this disease is a misnomer, as the ailment is scarcely ever attended with any of the symptoms of cholera.

The theory which we have adopted, and which we think is the correct one, is that this disease, by whatever name it may be called, is caused by diseased fermentation of food in the hog's stomach. When from any cause the digestive organs have become impaired, so as not to perform their functions properly, a diseased and excessive fermentation must follow. Excessive fermentation must necessarily produce acetic acid, which is taken up by the follicles and villi of the stomach and intestines, and passed directly into the blood. The blood, by reason of the addition of acetic acid, becomes thick, sticky and coagulated, causing thrombosis and embolism, which is the immediate cause of deaths in ninety-five cases out of 100.

The blood which is carried by the capillaries to the several tissues of the body is the source from which all the organs derive the materials for their maintenance, growth and development. If the blood is so sticky and coagulated that it can not pass through these small, hair-like capillaries it will necessarily clog up the passages, and the circulation must cease. Congestion and putrefaction must follow. As the blood is pumped directly from the heart to the lungs, where it separates into thousands of small capillaries in order to be oxygenized the embolism is most likely to occur there. Wherever the embolism occurs, congestion, extravasation, and mortification must follow.

Our medicine is prepared to meet these conditions, and unless the hog is so far gone that he will die before the medicine can operate, the medicine will cure it.

If there is any hog cholera in your vicinity now we would be pleased to place some of our medicine in your market.

Will you have the kindness to drop us a line and let us know where the disease is prevailing, if you know?

Very truly yours,

THE SOVEREIGN CHEMICAL CO.

COWNIE: I have received over 200 letters like this in the last two months. One firm has written me repeatedly that they wish me to try their cure, and sell it to my neighbors. I wrote to them saying that they could ship me a quantity and I would use it as a fertilizer. I would not feed it to my hogs. I hope this association will pass one resolution, and that is to condemn one and all of these so-called cholera cures. They are a fraud from beginning to end. There is no cure for this disease. We do not know what this disease is. One point that I wish to speak of is the forcing method that we have in regard to hogs. When I started in the business, forty years ago, I earned \$2.50 by helping a neighbor thresh, and I invested it in hogs. For thirty-eight years I never had cholera on the farm. Our pigs came in the early spring. There was no thought of forcing. They ran in pasture in the summer and all over the farm in the winter, and when spring came they were but little larger than in the fall before, but they never had disease. We kept them until they were from twenty to twenty-two months old and they weighed from 400 to 500 pounds. A neighbor of mine had hogs that weighed from 300 to 350 pounds at ten months of age, and as a result had disease. I believe the high feeding that has been done for years is injurious to the constitutions of our pigs.

BROCKWAY: I have been raising hogs for many years. My experience has been much like Mr. Cownie's. When the hogs were used as scavengers I had but little trouble with disease, but when I tried the forcing process, the hogs were not so healthy. I have been very successful in feeding hogs at a year and a half old.

C. F. CURTISS: In regard to the theory that the forcing process has weakened the constitutions of our hogs, why is it that the southern rail splitters die as quickly as the forced hogs when exposed to disease?

MYERS: I see we are taking up valuable time, and I think we had better drop this subject of hog cholera and take up something of more importance to us.

BAKER: There is a good old saying in bible history, "By the sweat of thy brow, thou shalt earn thy bread." Why should not the hog work? That is the question.

LEONARD: In looking over this meeting I see a great number whose heads, like my own, are gray, and all of you can remember the time when there was no hog cholera in this country. In those days, our hogs had a very little corn through the winter and in the summer were turned in the creek pasture and did not get any corn until the ground froze up in the winter. Later on, when the country was fenced up, they began to feed the hogs on the farm, and then the cholera came. Now what was the cause of it? It was because they did not get the exercise. I believe this hog cholera is hereditary.

W. W. McCLUNG: I believe there is another paper on this subject. I move we drop this subject, so far as hog cholera is concerned.

CHAIR: We will now have a paper by W. M. Pownall.

#### THE HORSE FOR THE IOWA FARMER.

W. M. POWNALL.

In conversation with a Utah sheep ranchman a few weeks ago, I made inquiry as to what kind of breeding horses they were buying now for use on the range in his territory, and he replied that they were not buying any, that they had learned more sense, that there was no money in horses any more, and that there were thousands of them ranging in his country that were not worth the expense of marketing.

While these statements might be prejudiced from a sheepman's standpoint, I am led to believe that he stated facts, and from reports generally, throughout the range country, this same condition regarding horses exists. The thought presented itself as to why this condition, and whether it is due to over-production or the natural unfitnes of that method of breeding and rearing, for the purposes to which the horse is applied, or both.

The conclusion arrived at is, that, however much or little over-production may be responsible for the failure of the horse industry on the range, the main cause of the almost total failure lies in the unfitnes of the method.

The Iowa farmer has felt the depression of the horse market, but much less than his western competitor; it has not bankrupted him; I question even if it has lost him money, yet it has made him feel very blue and discouraged, and led him to predict that the horse business would never again be what it has been; and, to a great extent, on account of this pessimistic view of the question, he has neglected the raising of horses.

While horses can be raised on a large scale—perhaps profitably—the best and most useful, are raised on small farms and such, to-day, form the bulk of the market horses of the country.

The disposition of the horse has as much to do with his usefulness as his muscular strength. Care has as much influence in making a handsome and useful animal as good blood, yet both are indispensable in making a good horse. Environment as to climate, fertility of soil, water supply, etc., has much influence on the production of horses, as well as men. In these respects the Iowa horse and the Iowa farmer are right on top.

The most desirable horses are obtained from farmers owning no more than they can handle judiciously on the farm, halter broke from colthood, and whose education in work is so gradual that the term breaking would seem almost obsolete. These horses are found in Iowa as a natural result, or outcome, of the farmers' actual need for horse power, and the incidental supply of surplus stock is the result of favorable environment, coupled with the appreciation of the merits of this stock, by the purchasing public. The preference for such horses over those grown on the range or ranch will always exist, no matter how much good blood is introduced, and to the extent that in periods of low prices like those current for the last four years, the western horse will be driven entirely out of competition, leaving the Iowa and Illinois producers in control of the field.

If there is a lesson to be learned by the Iowa farmer from the past depression in the market for horses, it is that only such horses as he is capable of raising have brought, and will always continue to bring, remunerative prices. Namely, well bred, well fed, and therefore, well formed and intelligent animals, learned not only from colthood to be kind and useful, but owing these proclivities also to their progenitors for generations back. The importance of using only the best of sires never was more emphatically presented than now, and the introduction of hundreds of such horses into the state for use next spring is necessary to our best interests.

If the four years of over-supply is not followed by at least four years of shortage, it will not be because the farmer himself has not contributed to bring it about.

If there is one class of horses more than another naturally adapted for the needs and profits of the Iowa farmer it is the draft horse. The evolution of farm machinery has been largely influenced by the recognition of the fact that the horse of the most power and traction is the one best fitted for the Iowa farmer's needs, and correlated with his personal need is also the fact that other lines of industry call for just such horses, at better remunerative prices, and for larger numbers, possibly, than any other class.

Next in importance, as I see it, comes, or will come, the carriage or driving horse. Iowa farmers are rapidly passing the pioneer stage of the state's development. Twenty-five years ago the farm wagon and farm team were the only means by which nine-tenths of the farming community got to town, to church, or to visit. To-day the nine-tenths use the carriage or top buggy, and a good share have the spring wagon besides, and all who have not a driving horse or team are only waiting for a favorable opportunity to purchase. The fertile soil, adequate water supply, and salubrious climate are rapidly making for the people of Iowa a prosperity that is real, and promises to be enduring, which is evidenced by a rapid increase in the facilities for pleasure and profit.

There is no more danger of the horse being supplanted by machinery than the human laborer; on the contrary I believe that the sphere of effort

is enlarged for both, if not directly, indirectly, by invention and that the greater production that improved machinery secures is more than balanced by increased needs which the supply justifies, and therefore contributes to progress, instead of changing the means to ends. An increase in the material wealth of the country naturally enlarges indulgence in luxuries. The luxury of a good driving horse, not more than a generation since, has become a necessity of the present, and calls for an increased production of such horses.

There is no reason why the Iowa farmer cannot produce, for his own use and for sale, these two classes of horses without becoming a specialist, and prosper thereby. The horse for an Iowa farmer is not only a necessity and a luxury but, as in times past, he is sure to be a source of revenue in the future. The horse croaker may be with the wheat croaker of a year ago before he knows it. History repeats itself in the changing values of all necessary commodities, and any one with a fair degree of the faculty of observation can now see that there will be many like the foolish virgins—with empty lamps—when the feast is called. Prudence dictates but one course in the production of the various farm cereals and live stock, and that is, to continue right along without regard to prices, aiming to increase the standard of excellence. Average prices for a term of years will always more than pay expenses, and he who produces the most and the best goods for the same outlay will have the highest average.

When we consider that it will be five years before the colts of the coming spring are ready for the general market, we can easily realize how little we can judge of what the market will be at that time, and also that an attempt to regulate the supply is more than likely to work in the opposite direction from that intended.

CHAIR: The paper is now open for discussion.

W. W. McCLUNG: I would like to endorse this paper. It is a good one, not very long, and full of meat. I think he has given us a good paper. I do not think the bicycle has done away with the horse industry. I think there will be a place for the horse as long as we live. The bicycle is a machine, and a great many of those who use it for pleasure will go back to the horse. There is a life about the horse that is not in the bicycle. There is nothing more attractive than a beautiful horse. The breeding of horses for size and beauty will be done more and more as the country grows richer and richer. I think one of the kind of horses that will always be in demand at a fair price is a large 1,100 to 1,200 pound horse that is stylish and handsome and that can go at, say, a four minute gait. The roadster class has run to speed. The draft class is too clumsy. We do not have a foundation stock to breed from to get this stylish road horse that I speak of. It will take time before we can get this kind of a horse and there will be many failures before we do get it. I think there are two kinds of horses to breed from

for the farm. We can breed these stylish roadsters for one kind and the other is the draft horse.

BAKER: I have had the class of horses that Mr. McClung speaks of for twenty-five years. They were brought from Kentucky. So I think there is a foundation to breed this typical road horse.

McCLUNG: We could not get enough of that class of horses in Kentucky to supply the demand for breeding stock in Iowa.

HALE: The important question is: What horses would pay the best for the farmer to breed? I think the horse that pays the best is the draft horse. We can sell them at four to five years old for from \$100 to \$125 with but little fitting to feeders or shippers. I believe we need more of them. There is but little expense in fitting and preparing them for market. I think the draft horse is the horse for the average Iowa farmer. They can not raise them on the ranch. They have tried and failed. They must be raised on the farm and the colts fitted for market.

BROCKWAY: I would like to add another horse to that list. A good many have a taste for the saddler. It is the most beautiful and attractive horse I ever placed my eyes on. A friend of mine is raising that kind of horses. He sells them at from \$200 to \$300. While I would take pleasure in raising draft horses, I would take more pleasure in raising saddlers. They are a grand and beautiful horse.

HALE: I think as much of the saddler as anybody, but what we want is an all-purpose horse.

J. A. EVANS: I fully agree with our friend McClung as to his ideas of a horse. We have a man in our town who has that idea and always has that kind of horses. He sold one last week for \$1,000, of the kind that McClung speaks of. No money was spent on this horse to develop speed.

BAKER: I will tell my experience in regard to these horses that are brought here from Kentucky. A man in Cascade sold one of these to go to Paris for \$75 and he was afterwards sold for \$150. They were the Mambrino Chief breed. A lady can handle them as well as anybody. Whatever the driver tells the horse to do, it will do.

BROCKWAY: Whatever we breed ought to be of the best blood. Blood will tell. We will be most successful with what we like best every time.

COWNIE: The most unprofitable horse is the general purpose horse. The cross of the French and German coach horse

on the common mares of the country is a failure. We can make a success in raising horses if we raise the right kind, and they must be the heavy draft. If we have weight, style, and action, we will get a good price for our horses. The best horse is the heavy draft, weighing from 1,600 to 1,800 pounds, with good style and action. I saw a team of this kind sell a few weeks ago for \$575. It is not wise for the average Iowa farmer to undertake to raise either the coach or the trotting horse from the foundation he has. It will require years and years to produce the horse we want and build up the industry.

McCLUNG: I am afraid I have been misunderstood. I said it was hard work to breed this kind of horses with the foundation we have. The farmer, if he has a foundation, can raise the carriage horse as well as the draft. There is a profit in these two classes. As to the saddle horse, I love him. The developed saddler is a high priced seller, but it takes time and skill to get the best results.

HALE: I think Mr. McClung is a good horse man, and I am glad we have such men, but I believe the average farmer will have better results by sticking to the draft horse, as only occasionally a man is fitted to raise these special class horses.

WALLACE: Permit me to say just a word. I think the advice of our farmer friend is practically correct. The expense for keeping the draft colt after the first year is less than keeping the roadster, and after the third year they will pay the expense of their keep in work. The trouble is, you can go into many places where there is not one horse in the country fit to breed from. You will find plenty of old imported stallions that are not fit for service. From the class of mares we have to-day it is a problem for me to know how we are to produce the class of horses the market demands. Very much of the trouble comes from the kind of stallions imported during the years when horses were a good price. That class of horses has been the means of getting the service fee down to such a low figure that there is no inducement, for anyone to bring in good horses. What horse breeders should do is to patronize better horses and thus encourage the stallion owners.

BROCKWAY: I disapprove of what has been said here in regard to the average Iowa farmer. The Iowa farmer should be more than the average farmer. The man who has the best blood, whether it be draft, saddler, or carriage horse, that quality should be developed. I would make a specialty of one kind of stock, and would stand by that kind.



GRUFF JOHNSON: I do not belong to this association, but I would like to say a word. Our importers have improved our stock until the people across the water come here to buy our horses, because they are better and cheaper than they can raise at home. I sold the first horse at public sale in Chicago that ever went across the water, and the man that was over to buy him was a public curiosity, but there are now scores of buyers constantly on the Chicago market for American bred horses. This proves that these imported horses have not ruined the horse business of this country.

WALLACE: I am glad to hear Mr. Johnson's speech. I indorse most of it. I want him to tell us how many scalawag horses he has sold since then. We do not want any more of the truck in our blood.

C. W. NORTON: I coincide with what Mr. Johnson has said on this subject, but there is a class of imported horses that have been sent here that are a disgrace to us. That is the class that Mr. Wallace refers to. Mr. Wallace was right. He was talking about a certain class of imported horses.

HALE: If we do not have the right kind of foundation we can not raise a desirable kind of a draft horse, but by taking mares weighing from 1,400 to 1,600 pounds, and by proper feeding, we can produce horses weighing from 1,600 to 1,800 pounds, which is the class the market demands.

WENTWORTH: Do you believe that what is called the general purpose horse for the farmer is a good kind to breed?

HALE: We do not want the general purpose kind. I advocate the draft horse, but I would specialize the horse industry the same as anything else.

BROOKS: I protest against the sentiments that have largely predominated here. The idea that the average farmer is not capable of raising anything but the draft horse is not founded on fact, but we should specialize. The draft horse is the easiest to raise, but the saddler, the roadster and the coach horse bring the most money. Within the last ten days thirty-one horses sold in my county at an average of \$955. They were roadsters. I am an enthusiast of the horse, also of the bicycle. The bicycle has come to stay, but it will increase rather than diminish the value of the horse in this country.

WALLACE: The money of the average farmer is in the draft horse. He will develop that kind, and it will put money in his pocket. There will always be plenty of men of leisure in

town that will produce the saddler and other kinds, but the farmer will be left to breed the draft.

C. F. CURTIS: I have bred and sold a good many horses. I like the idea advocated by Mr. Brooks. That is, excelling in some line of production. This requires judgment and application. The farmers of Iowa are not as good judges of horses as of hogs. The importers have given the farmers what they have asked for. We patronize the wrong kind. The farmers of Iowa are capable of producing a better class of horses. We need to make a study of these things.

COWNIE: The draft colt can be used on the farm and fitted for market, while these other classes require a special training.

MELICK: I recently made a trip east, and while I was there I took some pains to look into the horse business. About the first thing they asked me was what kind of horses we were raising out here. They told me they used to want the 1,100 to 1,200 pound general purpose horse, but they had quit it. I found the market demanded either the road horse or the heavy draft horse.

C. W. NORTON: I favor the breeding of the draft horse and believe it is much the best for the Iowa farmer. I usually have a carload of this kind of horses to dispose of each year. It is very much better for our boys to handle this class of horses than the speed horse.

BROOKS: It takes time and skill to develop the saddler and road horse, but they are more attractive than the draft horse, and our boys will take an interest in them, but I fear if we raise the draft horse alone it may have a tendency to make the boys think the farm is a little dull, and believe they can develop the other class of horses without injuring their morals at all.

WENTWORTH: I believe in the special purpose horse. I think I own the best all-around mare in Iowa, but I have found that I should cross her with the special purpose horse. I have a one-half Norman colt from her that I use as my business horse, and that I can sell any day for about \$300, but I afterwards crossed her with a horse of the same kind that she is and the result was a colt that sold for \$1,500, and two other colts bred in the same way have sold for long prices.

W. W. VAUGHN: We ought to stick to the same kind of blood. We cannot expect good results by changing around too

much. This is what is the matter with a large proportion of our horses to-day.

Moved and seconded that the convention adjourn until the evening session at 7 o'clock.

Carried.

### WEDNESDAY, DECEMBER 7TH.

Meeting called to order by the president at 7 P. M.  
Music.

Chair announced appointment of the following committees:

*Committee on nomination of officers.*—W. W. McClung, E. C. Holland, J. N. Dunn, W. M. Lambing, J. R. Crawford.

*Committee on location.*—C. S. Barclay, J. P. Manatrey, E. C. Bennett, C. W. Norton, J. M. Erlon.

*Committee on resolutions.*—Henry Wallace, John Cownie, R. J. Johnston.

CHAIR: The next thing on the program is a paper by John Cownie.

COWNIE: It is no fault of mine that the subject assigned to me was "Corn and its Cultivation." If I had had a chance to select my own subject to deliver before a mixed audience like this, it would not have been cultivating corn. But the executive committee gave me this subject and I have prepared a paper and if it does seem dull to some of you that are not interested in the cultivation of corn, I hope that the discussion that will follow it will make all of us inclined to raise this great staple crop.

### CORN AND ITS CULTIVATION.

JOHN COWNIE, SOUTH AMANA.

With selling corn at from 10 to 15 cents a bushel—about one-half the cost of production—it would seem that the time devoted to this paper might have been more profitably assigned to some other subject.

That the supply of this great cereal already exceeds the demand is undeniable, and the ruinous prices for some time prevalent, gives little

encouragement for increasing the crop. Admitting that the financial stringency through which we have just passed, and the unfortunate business conditions of the country have been prominent factors in causing the low prices prevailing, there are still other reasons that must be taken into account before we can arrive at the true causes of the present depression in values.

In the first place a drouth, such as never before was known in this state and continuing for several years, destroyed the grass fields, compelling the plowing and cropping of the ground, while at the same time bare pastures and a scarcity of water caused the shipment of a large number of cattle that, with other conditions existing, would have been retained upon the farms to consume at least a part of the corn. Swine disease has also been an important factor and many of our most progressive farmers, who make it a rule never to sell grain, but are often buyers, found themselves without stock sufficient to consume the grain they had raised, and sought a market for the crop.

But these conditions will not always exist, and there is no question but the tide has already turned, and ere long corn will cease to be a drug upon the market and will soon again command a fair price. And this result will not be accomplished so much by obtaining new outlets for the grain, but rather by seeding our lands with grass, thereby reducing the acreage of corn, increasing the size of our flocks of sheep, our herds of swine and cattle, and instead of selling grain, convert it into meat, upon the farm that produced it.

Of late years we have heard a great deal in regard to the high value of Danish, Irish and Canadian pork over that produced in the United States, and our beef also has been discriminated against in foreign markets. Our great staple, corn, has been accused of causing this condition by making the animals too fat, and we have been advised to change our breed of live stock, substitute peas, etc., for corn, and place our stock upon the market half fattened. Those who have followed the advice have found no reason to return thanks for the information, for to-day the market demands in every class of live stock, well bred, fully matured, and well finished animals.

When due allowance is made for the prejudice existing against the products of the United States, in European countries, it will be found that no change in breeding or feeding that we could make would remove that prejudice, and to even try to overcome it in this manner, would be mere folly.

In the future as in the past, corn must remain our great staple in fattening stock, and the pork, mutton and beef from well bred animals fattened to a finish with this grain, will rival if not excel in quality of flavor, palatability, nutritive value and healthfulness, that made from any other crop that can be produced.

In the profitable production of any crop, there are two essentials required and these are—the greatest possible yield, with the least possible expense.

In this paper I propose to call your attention to a few of the salient points necessary to insure success in the production of corn, and while much that I may say is not now but familiar to all of you, I shall not hesitate to express my own opinions, even when they differ very widely from those entertained by the great majority of writers on this subject.

An experience of over forty years in growing corn, supplemented by reading and hearing everything possible on the subject, combined with a desire to know the truth, and yet close observation of results by different methods, may be accepted as a slight excuse for what might otherwise appear as merely dogmatic assertion, without facts to warrant a positive conviction.

**Seed.**—The prime requisite in seed corn is that it shall be well matured, sound, and all surplus moisture expelled before the advent of cold weather, and that it shall be kept warm and dry until it is planted. The advice is often given to gather seed corn when husking the crop, which is usually in November. While a better selection can no doubt be made at this time than earlier in the season, such teaching is pernicious in the extreme, and the practice of this method has cost the farmers of the corn state millions of dollars. In a season such as the present, when owing to extreme dry weather corn was fully matured and thoroughly dried in the fields, gathering seed when husking, may prove all that could be desired.

But we have only to go back one year to the fall of 1896, when owing to the wet weather and immature condition of the corn, much of the seed saved when husking proved worthless, and a thin stand the present season was the result. A common method of saving seed corn, even by those who realize that it should be gathered early, is to suspend the ears on a rope or wire stretched between posts or trees and exposed to every change of weather, while others utilize some outbuilding for the purpose. I unhesitatingly condemn both methods as being in direct violation of the scientific principles involved in protecting the germ of the kernel, on the safety of which depends its future life. Corn, as is well known to every farmer boy whose duty it is to turn the crank of a corn sheller, absorbs moisture from the atmosphere, even when protected by a good roof, during a time of rainfall or even foggy weather, and in this condition is liable to be injured by cold so far as its germinating properties are concerned.

There are many methods of saving seed corn, but there is one method only that never fails, and which can be depended upon to germinate 100 per cent regardless of the weather in the corn planting season. Seed corn should be carefully selected in the latter part of September or early part of October, suspended or spread thinly upon a floor to prevent moulding, and dried by fire heat before cold weather. It should be kept warm and dry all winter, where changes in temperature will not affect it, and while some may specially furnish such conditions, with the great majority of farmers an attic over the kitchen with a register over the cook stove, allowing the heat to ascend, will prove the ideal place to keep seed corn from the time it is gathered in September until it is needed in the spring.

**Soil.**—While there are many different conditions of soil, all requiring different methods of preparation for the growing of this cereal, I will confine myself to a few suggestions in regard to preparing corn stalk fields, stubble ground and grass land for a corn crop. With corn following a like crop, spring plowing becomes a necessity and the remaining stalks must be disposed of. Cutting, raking and burning the corn stalks has the advantage of putting the field in good condition for plowing and after-cultivation, but I much prefer to cut the stalks with a stalk cutter in dry weather and plow them under, covering them so deep as to be beyond the reach of the tools

that must follow in after-cultivation. While there may not be a large amount of plant food in the dry stalks, still properly covered, they will speedily decay, and there is no question but they will prove beneficial to the soil. In plowing, I can not too strongly condemn the practice of "plowing around" the field, even yet too common, for we are a peaceable people and have no necessity for breastworks surrounding every field. The ground should be plowed in beds as large as convenient, beginning by throwing out two furrows and then back-furrowing into the open furrow. The first furrows should be run somewhat shallow, and the depth gradually increased until the third or fourth round has been reached, when the full depth required should be attained. With new ground deep plowing is not necessary, but as the land becomes older the depth should be gradually increased on our prairie lands, until from eight to ten inches of the surface soil is exposed to the action of the atmosphere. Two back furrows should always be turned into the dead furrow, and when the land is next plowed, the commencement should be where the finish was the year before. By following this method and doing the work in a proper and scientific manner, the surface of the ground is always smooth, without ridge or hollow, and when the head lands are neatly plowed, thrown out the next year, and gathered up the next, the surface is always even and in the best possible condition for the crop.

In wet weather, the spring plowed corn stalk ground should remain unharrowed until just before planting, but in dry weather the harrow should follow the plow as closely as possible, thereby preventing evaporation of the much needed moisture, and at the same time crushing and smoothing the surface before lumps are formed.

**Stubble Ground.**—When corn follows a crop of small grain, the ground should be plowed as early in the fall after the removal of the crop as possible. When this is done, many of the autumn weeds are prevented from seeding, and if the work is properly done, with stubble and weeds thoroughly covered, heat and moisture hastens decomposition, and the soil is enriched by the liberated gases evolved during the process of fermentation. In late fall plowing with cold weather and frost, neither stubble nor weeds decay, the soil is not packed sufficiently, and the conditions are not favorable the following year for a good crop of corn. Were it not for the saving of time in the spring, I would much prefer spring plowing of stubble ground to that of late fall plowing.

**Sod Ground.**—The ideal soil for a corn crop is a well sodded pasture field, and if a heavy crop of clover is turned under, all the better. Grass land should be plowed as early as possible in the autumn, for the same reason as given in regard to stubble ground, and the liability of the young corn being destroyed on spring plowed sod ground by cut worms, adds one more reason in favor of fall plowing. And in addition to escaping the risk of loss by cut worms, the sod is much easier prepared for the crop after exposure to the atmosphere during the fall and winter, than when spring plowed; to say nothing of the saving of time at a busy season. The farm horses are also in much better condition for heavy plowing in the fall than in the spring when all work is crowding and the time very limited.

**Preparing the Soil after Plowing.**—It is a common practice with many farmers to plant their corn without harrowing the ground, claiming that

more effective work can be done in destroying the weeds if the work is deferred as late as possible. While this is no doubt true, there are serious objections to this method. To secure an even, uniform stand, it is imperative that the ground should be as smooth as possible before planting, and disc harrow or cultivator, smoothing harrow, roller or clod crusher, should be liberally used to insure a smooth surface for the corn planter, thereby insuring a uniform depth of covering. The aggregate annual loss to the country by poor plowing and improper harrowing before the corn is planted would reach a fabulous sum, and the missing hills if counted on a forty-acre field would often show an actual loss of several acres.

*Planting.*—On new land from woods, drilling will no doubt produce more corn than hill, cultivation, but the check rower properly handled, gives better opportunity for destroying weeds, and as our soil and climate are favorable for their production, corn should be planted so that it can be closely cultivated both ways. An even distribution of the seed is necessary, for while six stalks in one hill and the next hill a blank, averages three stalks in a hill, it is readily apparent that three stalks in each hill would give better results.

Strenuous efforts have been made by manufacturers of corn planters to perfect a machine that would drop a stipulated number of grains in a hill, and the thin seed plate, driven by chain and gearing, dropping one grain at a time in a receptacle, theoretically accomplished the purpose. But in practice I have not yet found one, although I have tried a number, that succeeds any better, and often not as well as when the thick plate is used. As the seed in dropping is measured instead of the grains being counted, kernels of a uniform size should be selected for seed. In shelling the seed corn, all tip and butt grains should be rejected, not on account of lack of germinating power, but on account of size, and I find it profitable to sort my seed in two or three lots, according to the size of the kernel, and select the seed plate that will come the nearest to dropping three kernels in each hill. By careful selection in this manner, ten strokes of the planter will drop from 28 to 32 grains and the large majority will show 3 grains at each stroke.

*Depth of Covering.*—No rule can be laid down as to depth of covering, much depending upon the condition of the soil and the weather. There is no question but that there is more loss from too shallow planting than from too deep, especially when the ground is rough and the weather dry. In cold, wet weather, a depth of three inches will be found sufficient, but if at all possible to avoid it, corn should not be planted when the ground is cold and wet. As to time of planting, much depends upon the season, but it is a safe rule to follow to get everything in readiness and plant as soon as the ground is in good condition and the weather favorable.

*Harrowing after Planting.*—When the ground has been made smooth by repeated harrowing before the corn is planted, efficient work in the destruction of weeds is somewhat difficult afterwards. The two-wheeled corn planter, leaving a depression in the ground on each row, is not conducive to effective work by the harrow, where it is most needed. The four-wheeled planter was designed to remove this objection, but it also falls in a large measure through inability to elevate the soil sufficiently over the row. The harrowing of the ground between the rows, for the destruction

of the weeds, is of no value whatever, for this work will be done by the cultivator, and what is needed is a corn planter that will leave, instead of a depression, a small ridge over the row that the harrow will catch, level down and at the same time eradicate the weeds in the hill where they cannot be reached by the cultivator. In the absence of such a planter, an implement might be devised that would thoroughly harrow a strip only about a foot in width over each row, and if three of these implements were attached to a frame, in such manner as to cover that number of rows, it is readily apparent that far more effective work could be accomplished than by undertaking to cover the entire surface. Following the planter with the cultivator, using the wheel mark as a guide and covering the row with fresh soil, and then cross-harrowing, proves with me, an effective method of destroying weeds on fall plowing or very early spring plowed ground.

In every cornfield there are more or less of the hills that have a stunted appearance in comparison with the best, and after careful examination for a number of years, I am convinced that indiscriminate harrowing is accountable in a large measure for the stunted growth. When harrowing after the planter, it is an easy matter to have the team straddle the row, but in cross-harrowing this is impossible, and of necessity many of the hills are tramped upon by the horses and the soil closely packed. An examination of the roots of the stunted plants in the great majority of cases revealed the foot-print of a horse on the hill, and although the depression had been filled with the harrow, the hard, impacted soil gave every evidence of having retarded the growth of the corn. Hereafter I intend to use more discretion than formerly in regard to harrowing corn, especially when the soil is in a condition to bake when heavy pressure is applied.

*Cultivation.*—As soon as corn can be traced in the row, cultivation should begin and the cultivator should be run as close as possible to the young stalks, while the roots are small. If the corn has been properly checked, it can also be closely cultivated crosswise, the great object being to bring the shovels as close together as the stalks will allow when passing the hill. In badly checked corn, this can not be done and the result is that a sod forms in a short time among the stalks, and growth is ever after retarded.

There is a wide difference of opinion in regard to which is the best tool for cultivating corn, and whether cultivation should be deep or shallow. Time and space forbids me from entering upon this phase of the subject in detail, and I will only remark, that with new, clean ground, shallow culture will answer every purpose, but when the land is foul and wet it ought to be stirred to a sufficient depth to not only destroy the weeds but to prevent their growing for some time. But it is not alone the destruction of weeds that proves beneficial in cultivation, but the aerating of the soil by a thorough stirring proves of immense value in promoting plant growth. In this connection weeds are not altogether an unmix'd evil, for without them cultivation would be largely neglected, and the soil deprived of sun and air, would fail to supply the immense amount of plant food required by a corn crop.

Corn should be cultivated four times and the cultivator gangs should be set farther apart after the second cultivation, that the roots may not be injured, but never cease cultivating for fear of cutting the roots, for damage from this cause is more imaginary than real. In extremely dry weather I

have seen corn injured by injudicious cultivation, but I have also seen a thousand times more loss to the crop for want of proper cultivation.

Not more than two crops of corn should be raised in succession on the same field, the second crop being followed by small grain, seeded with grass and with a crop of hay, and two years in pasture, with all available manure applied to the grass land; a bountiful crop of corn can then, by following the suggestions here given, be confidently expected. One-half of the acreage now annually devoted to corn, with a general application of the methods here outlined, and every part of the work performed in the most thorough manner, will produce in a series of years more corn than is now being raised, and herein lies the profit to be secured by intensive, rather than extensive, corn cultivation.

Let no one become discouraged on account of the low prices now prevailing. A better day is dawning, and when reason and truth take the place of prejudice and ignorance, it will be found that the improved breeds of live stock, which we have now, raised and fattened upon the grasses and corn of Iowa, will successfully compete in the markets of the world with the products of any country or people.

CHAIR: This paper is now open for discussion.

BROCKWAY: For fifty five years I have seen the corn ripen in this country. The paper of this gentleman is certainly one of much merit; the suggestions are all good, and I would not make many changes in it. Some things he forgot, though; one is on the selection of seed corn. I got some seed corn at the state fair at one time. It was a special kind of corn. I thought it the most beautiful corn I ever saw; I took it home and planted it, and for a number of years gathered the seed on the 11th of September. I remember the day because it was an anniversary of mine, and I, for a long time, made it a point to gather my seed corn on that day, which was the anniversary of my marriage. But I found that this was too early and that the corn petered out. I now prefer a more uneven ear for seed, heavier at the butt. I am convinced that seed corn should not be gathered until in October. As to the time for planting corn, when I plant at the time the plum blooms are coming out I find I always have a good crop. If I wait until later I often fail to get a good crop.

L. O. MOSHER: If there is one thing that I really take pride in it is our corn. I have found that, in selecting seed corn from the field, one naturally selects the earlier ears which are usually the smaller, and by following this practice year after year, the corn will become earlier and earlier and smaller and smaller. It is now my practice to select my seed corn at husking time, when a better selection can be made than at any other time. The fact is, we pay too little attention to the selection of our seed

corn. If we paid the same attention to the selection of our seed that we do to the improvement of our stock, we would raise more corn.

BROCKWAY: You will find some smut in corn that is gathered early.

J. M. ERION: I have selected, for my own use, seed corn for twenty years. I never in my life selected my corn until I began to crib it. Mr. Cownie advises gathering seed corn on the first of September. My experience does not teach that.

LEONARD: My experience has been that early selected seed corn produces the best results. I once gathered corn when it was hard roasting ears and planted it by the side of corn selected when more mature, and the early gathered seed came up two days sooner, was a better crop, and grew faster than the other.

C. W. NORTON: I would like to make an inquiry, and that is where he keeps his seed corn through the winter?

COWNIE: I keep it on wires in an upper room in the house.

NORTON: My wife and I lived very happily together for many years, but I found we could not continue to do so if I kept seed corn in the house. I placed my seed corn in an upper room, and the mice got into it and run all over the house, and I have not kept it in that way since. I advise farmers to try some other way.

J. W. BLACKFORD: Does using the ends of the ears for seed deteriorate the quality?

COWNIE: I only discard the ends because of the difference in the size of the grains. I have been trying to get three stalks to the hill, but have not entirely succeeded. We had a test of planters at the state fair, and I found that they all failed when it came to an absolute uniformity of drop. One manufacturer of planters asked me what I expected in a machine. I told him I wanted a machine that would absolutely drop three grains in every hill. He replied, "Well, you will have to wait until you get to the next world for that." Mr. Leonard is correct when he says that corn gathered in roasting ear time will make the best seed. There is no question but that you can make a better selection of seed when husking. I have seen corn gathered at husking time that would not germinate. If you gather it in October before husking, it is perfectly safe. If your corn has been frozen it is ruined for seed. A neighbor of mine called my attention one season to his field of corn. One portion of it was far more promising than the other, probably 50

per cent better. He asked me the difference between the two fields and I replied that he had manured one field and not the other. He said, "No, the difference is in the seed. The smaller crop came from seed selected out of the crib, while the other was saved early from the field." The best manner to save seed corn is to select it and place it in a smoke house, and gently smoke it for a few days, and you will have the best kind of seed corn.

CHAIR: We will now listen to a paper by Mrs. R. J. Johnston.

MRS. R. J. JOHNSTON: When informed by our secretary that I must write a paper and read it before this association, I was somewhat at a loss to know what subject to select, but I had a dream that I will relate to you, and if after listening to me any of your feelings are hurt, you must remember that dreams always go by contraries.

#### A JUST DECISION.

##### I.

One summer day that was sultry and hot,  
I had eaten my dinner and laid down on my cot,  
Had closed my eyes on this vale of tears,  
And bid farewell to both hopes and fears,  
For I'd left behind all earthly scenes  
And was basking now in the land of dreams.

##### II.

I was sailing away on the wings of bliss  
To a place that was brighter and fairer than this.  
It seemed some time, but it wasn't long  
Ere I caught the strains of a sweet, sweet song,  
Such music I never had dreamed of before;  
Was sad when it stopped, for I longed to hear more.

##### III.

Then I opened my eyes the sights to behold,  
And the scenes I witnessed can never be told.  
There were pearly white gates set with diamonds so bright,  
And they needed no lamps there, for they never had night;  
The streets were pure gold and the houses of glass  
And the walls round this city were all polished brass.

##### IV.

I was filled full of awe at a sight so great  
And meekly sat down just outside of the gate.  
A continuous stream was coming up from below  
And thought I may here see someone I knew.  
Just then a form came, I was sure that I knew,  
So watched with great interest to see what he would do.

##### V.

He seemed in a hurry and tried to push through  
Without giving St. Peter a chance to interview;  
But the guard held him back, saying it may seem strange,  
But we are not acquainted, don't even know your name,  
Then the stranger glanced up with a look of dismay,  
Saying, can it be possible you have never heard of McFadden, who would  
always have his own way?

##### VI.

I've lived in West Liberty a long, long time,  
Have been a member of the city council, and secretary many times and  
dined upon wine,  
Have friends in the east and friends in the west,  
Am at home in Chicago, but like Cedar Rapids best;  
So you see I am known in most every place,  
And to be stopped in this manner is indeed a disgrace.

##### VII.

But St. Peter replied with a sad, sorry look,  
Your name sounds familiar, but is not on our book,  
And none are admitted or wanted in there  
Who seldom went to church or never uttered a prayer,  
A success on the earth, I've no doubt you did make  
But the road to the left is the one you must take.

##### VIII.

Then another came up whom I'd seen oft before  
And he sought admission at this same open door;  
St. Peter said, stranger, it doubtless seems queer,  
But no name that looks at all like Norton have we here,  
I've no doubt you would honestly like to go in  
But your life on earth must have been spotted with sin.

##### IX.

Still I'm impressed with your looks and just for your sake,  
I will try and find out if there's not some mistake;  
I guess I can trust you, just stand here alone  
While I step just inside and talk through the 'phone,  
He gave three rings that were loud and clear,  
Then took down the receiver and put to his ear.

## X.

Hello, Wilton Junction! Hello! back I could hear,  
 And then came the question: Do you know Norton that's up here?  
 And through the wire inside, just out of my sight,  
 I could hear the answer plainly: He built us a school and I think he's all right.

Then said St. Peter, C. W., now I'll let you go in,  
 But behind you must leave the stories of Imp. Prince Charlie and the \$1,200 Simplicity, as well as discard all sin.

## XI.

Next came two, one was Roberts who of his Red hogs could tell quite a yarn.

The other was McClung who for his Polands built a great barn.

St. Peter said, Elder, thrice welcome you are,  
 But you must be weary coming so far,  
 Your comfort we'll care for, you may depend,  
 But who is this with you, can you vouch for your friend?

## XII.

I'm afraid, Elder Roberts replied, I can't say all you require,  
 But he has an excellent wife, who sings in the choir,  
 And her account I am sure, if so you could do  
 Would be large enough surely to pull the net both through;  
 But St. Peter said, Elder, we can't possibly do so,  
 They must here stand alone or else go below.

## XIII.

I know it's a custom down in human life,  
 For a man to be measured by the virtue of his wife;  
 But up here, where there is no sin,  
 He must pass for himself or he can't get in,  
 And so, Mr. McClung, I am sorry to say,  
 You must now leave your friend, and I'll bid you good-day.

## XIV.

Next along came a man with a confident air,  
 Saying, with this recommend I'll surely get there;  
 So he walked boldly up, and took off his hat,  
 While he held out a paper, saying, please look at that,  
 It read something like this, though too long to repeat,  
 If you want a good man, the bearer can't be beat.

## XV.

He's been in my employ most all of his life  
 And one of my daughters was known as his wife;  
 Now, any kind favor you may wish to extend,  
 Will be alike to me, as it is to this friend,  
 I will see you some day, and if he don't get in, I'll feel quite hurt.  
 Signed, I remain most obediently yours, M. H. Gabbert.

## XVI.

St. Peter smiled as he handed it back,  
 And said for assurance this has surely no lack;  
 But what's more to the point and would help more your case,  
 Would be some act of kindness, you have done for your race;  
 And when you bring me some proof of deeds like this,  
 I will pass you in gladly to the city of bliss.

## XVII.

Then he turned to one side, feeling sorry and blue,  
 Not knowing just what was the best thing to do;  
 When he spied me sitting there under the tree,  
 He ran up and grabbed my hand and shouted with glee,  
 Oh! my friend, I'm so glad to see you here!  
 I was scared most to death, but now I've no fear.

## XVIII.

Then together we went once more to the gate,  
 For I felt very anxious as to my friend's fate;  
 Said St. Peter to me, now you know what it needs,  
 Was Mr. Risk in the habit of doing such deeds?  
 I said, yes, of his generous acts I could tell you a score,  
 But this isn't saying, he couldn't have done more.

## XIX.

But this was sufficient and my friend got in free,  
 While I returned to my seat 'neath the same shady tree;  
 And I said to myself as I sat there alone,  
 If I had but one wish, it would be to go home.  
 For then I am sure by being thus inspired,  
 I could tell all my friends just what is required.

## XX.

But this, my soliloquy, was soon at an end,  
 No name will I mention, for you all the form can recognize, that now came  
 round the bend,  
 He went straight to the gate as did those before,  
 But was chewing tobacco and spit on the floor;  
 Now, St. Peter said, wouldn't that look neat,  
 All spotted around on that clean, golden street!

## XXI.

There is nothing unclean can enter in there,  
 So wash out your mouth and comb up your hair;  
 For though you have faults that are an open disgrace,  
 You have a kind heart and it's in the right place,  
 And for this alone, your reward shall be given,  
 A future abode in the kingdom of Heaven.

## XXII.

Next came a man with a large, heavy frame,  
And said, I'm from Mason City and Van Auken is my name.  
Oh yes, we know you! you once had charge of a school,  
Where everything was done according to rule;  
Now because you were true to your trust down below,  
You are welcome in here where we never have snow

## XXIII.

Then I saw Friend Lamberg approaching quite slow,  
Not seeming real certain which way he should go.  
But St. Peter said, stranger, of you I well know,  
You were a traveling man in the world down below;  
Now, "while a camel may squeeze through a needle's eye,"  
A traveling man's hope isn't the sweet life and bye.

## XXIV.

Just why it is so, I am sorry to say,  
I have never found out, even not to this day;  
But it's a lamentable fact and makes me sad;  
That in such a bright lot of men so many are bad;  
Though they control many votes and dress very fine,  
Yet when they get up here they don't shine.

## XXV.

Now approaches a tall form who walked with an air  
As much as to say I know how to get in there;  
To St. Peter he said, there is my badge, I'm a director of the state fair,  
St. Peter wearily smiled as he said, I think you're mistaken, I can't let  
you in.

Of you I've often heard. At home they called you "Bob;" you ran a bank  
and in politics did win,  
But when from home you went, you posed as "Farmer Johnston," who  
sixteen hundred dollar hogs could raise;  
These deeds exclude you from here, although for the non on earth, they gave  
you much praise,

## XXVI.

True, said the form. I ran a bank and got politics down to a fine art,  
Still, to my friends I was ever true, and always took their part.  
"Behind me I left a name at which rogues grow pale."  
Of the many I have sent to jail for writing o'her men's names, I could tell  
you a long tale,  
"A good name is rather to be chosen than great riches," in the Good Book  
we are told,  
So the good old name of "Farmer" I took, the riches I could not help, they  
came because to the riches' bidder my hogs I sold.

## XXVII.

But one question I would ask, when my wife passes this way, will she go in  
with the blest?  
Oh, yes! said St. Peter, we shall take her in here where she can get rest,  
Let me in, plead the form, I'll not try to bless you, nor heaven to run. I'll  
always do right.  
For with my wife I must be, so she my letters can write.  
No, answered St. Peter, never a stove would you put up on earth,  
So below you go, where stoves they never need, because of heat they have  
no dearth.

## XXVIII.

Then came two forms, a-m in arm, walking slowly round the bend,  
St. Peter started and exclaimed, "Angels defend us," who next won't they  
send?  
I have often heard, "When rogues disagree honest men get their dues,"  
But when they agree, what then! to think of it gives me the blues.  
The forms now stopped at his station in front of the gate;  
Said one to the other, the farmers we fooled, and I think we can catch St.  
Peter with our bait.

## XXIX.

Then up spake St. Peter: Henry Wallace and Jim Pierce, for you we have  
no place;  
Heaven is too small for you to dwell together in peace and grace.  
If Wallace I should admit to this bright city, for a receiver he soon would ask,  
And when his petition we denied, a rival Heaven he would start, although  
it might be a great task.  
As to you, Mr. Pierce, Heaven's not your home; the reason why you should  
know—you're no fool,  
And of no man here can you make a fool;  
So to Klondike you may go to stay,  
Where your game of freeze-out, you can play all day.

## XXX.

And you, Mr. Wallace, can go below, to prepare a warm place there,  
For the swine breeders who your banquet refused to attend, which made  
you say something not very rare;  
To keep you company, of the Homestead staff, I'll send Lucas who, in public,  
sometimes makes speeches,  
Franklin, who on how to run gates and the value of sheep, often preaches,  
And Stewart, who for large fees, once examined banks  
in a way that made some think him quite a crank.

## XXXI.

Just then I awoke, or might have been there yet,  
But I had learned a lesson that I can never forget;  
Oh that look on those faces, of sorrow and woe,  
As they turned to the left and went down below;  
It's a picture that's with me both by day and by night,  
It showed to me plainly, it pays to do right.



## XXXII.

Now this is the moral I'd draw to this rhyme;  
 Don't wait until too late, but commence at this time  
 To prepare for the meeting at the great nearby gate,  
 For what isn't done now, will then be too late;  
 So each golden day, let it be understood,  
 That's well to do some kind act that there will do us good.

## XXXIII.

And with this parting word I will now say good-night,  
 And hope in the end all will be right,  
 And then altogether in that Happy Land,  
 We will meet day and night, an unbroken band,  
 And, though our work will be different, just what I can't tell,  
 But whatever it is, let's do our part well.

CHAIR: The secretary suggests that this paper should be open for discussion, with the accent on the second syllable. Who will have the first say.

WENTWORTH: I suggest that each plead guilty to the indictment and we pass on to the next paper.

CHAIR: The next paper is by A. M. Caldwell.

## THE MILK AND BUTTER SIDE OF THE CATTLE BUSINESS.

A. M. CALDWELL.

I feel highly complimented on being invited to address the meeting this evening. Indeed, I may say I feel doubly complimented. First because of the character of the men, and secondly because of the character of the state in which you live. Allow me to say first that of all the callings of life, none in my opinion are higher than that of the agriculturist, and certainly none have more to encourage the boy that is ambitious to carve his name high up on the pinnacle of fame side by side with the greatest men the world has ever seen. For up from the humble walks of farm life have come the Lincolns, the Grants, the Garfields and hundreds of others that I might mention whose names are household words and whose deeds of true greatness are a beacon light to the civilized world and whose star will grow brighter and brighter with each succeeding year through all the ages yet to come.

From the farm must come not only the food supply of all the large cities, but in many cases the men that manage the great business concerns of the world. I am tempted to stop here a moment and say a word to the farmer boy that turns a longing eye towards the great cities and fain would exchange places with the city boy. Farmer boy, there is a squalor and a wretchedness there of which your pure soul has no conception. Go back to the pure atmosphere of the farm, though hard its lot at times may be, and stay there

till the habits of life are formed. Then if you wish to cast your lot with the men of the city, you will be better prepared to battle with the temptations of life. There is an unlimited and unsupplied demand for men of ability and sterling integrity, and I know of no better place to grow such men (pardon the expression) than on the farm.

That peculiar, eccentric, yet eminent orator, Sam Jones, says, "I have seen society from ocean to ocean. From the lakes to the gulf, from the White House in Washington to the humblest cabin in the land, and I declare to you to-night, that the highest type of social life I ever saw was in the plain, country home where the father and mother, sisters and brothers gathered around the old hearthstone, and partook of the bounties with which the great Giver of all good has supplied them. Then the father reads a portion of God's Word, and all humbly kneel and ask the blessing of heaven to rest upon them, and to guide them in the way of all truth."

It is up from such homes as this that come the men and women that move the world.

I feel complimented, I said, in the second place, because of the character of the great state in which you live. Allow me to say of your state, first—that of all the states of this great commonwealth, reaching as it does from the rock-bound coast of the stormy Atlantic on the east, to the placid waters of the mighty Pacific on the west; from the snowy regions of the north, to perpetual summer in the south—there is not a state in all this sisterhood that we acknowledge as a rival but one, and that is the great state in which we stand to-night, the matchless Iowa. I first visited your state in the month of June, when all nature smiles, as it were. I did not take the wings of the morning, but I did take the morning train at Morning Sun to this place, and from here to the capital of your state, and as we fled onward toward the setting sun over this most magnificent stretch of country with its hills, valleys, streams, lakes, groves and plains, dotted here and there and yonder with comfortable houses and barns, with contentment and happiness written on every tree and shrub, as far as the eye could reach stood its fields of waving grain, promising seed to the sower and bread to the eater, fair indeed, as the garden of the Lord, I said to myself, "If there is a place on this sin-cursed earth where the flowers bloom eternal and the sun is always bright, then that place is here."

Now, my friends, do not think I say this to flatter you, for I do not. I despise flattery above all things. I say this of your state because I believe it is true. I say it to make you think more of your state than you do. Why do we love the great state of Illinois? We love her because of her wonderful cities. We love her because she was the home of Lincoln, the liberator, and Grant, the silent soldier. But most of all do we love her because of her millions of prosperous and happy homes. For after all is said of the best country, that country is the best whose people are the most prosperous, and consequently, the most happy. For it has been truly said, "Individual happiness depends upon individual prosperity." Then that country or state which brings the surest reward for honest labor, is the best state. In the state where I live, and where I have lived all my life, I can call to mind more than forty years, and in all that time there has been seed time and harvest. There has always been enough for all, and some to sell. I am told the same is true of your state. Now, my friends, if God has a country

on earth, that country which will produce forty crops in succession must be His country. Then, allow me to say, in concluding this part of my address, buy this land and sell it not. It is the greatest financial legacy you can possibly leave your children.

But I was to talk about milk and butter. Perhaps it would be well for me to tell you why I produce milk and butter. Many years ago, as the story goes, we raised corn, corn, corn, each succeeding year in the same field. This worked well for many years, but by and by we began to think the seasons were not so favorable as they had been formerly, for we did not raise nearly as large a crop as in other years. But finally somebody told us, or at least we learned, that we had been continually taking away from the soil in the shape of grain crops, and had been putting nothing back. In short, we learned that something had to be done, and we learned too, that, of all the fertilizers, either natural or artificial, home-made or commercial, none were so good and so cheap as clover, common red clover. Land sown to clover for two or three years was found to produce as well or better than ever before. Then how to utilize this crop was the question. It was found that it was not a good feed for horses, owing to the fact that it was so very hard to cure properly. But cattle ate it and did well on it, both in its green state and after made into hay, and the dust did not seem to affect their lungs as it did that of the horse. So we concluded to raise clover and pasture it in summer with cattle and feed the hay to them in the winter, and thus we seemed to have solved the problem of renewing our land. Beef cattle commanded a good price then. So nearly everybody that kept cattle kept beef cattle, myself among the rest. All went well for a time. But alas for the beef business. The plains were turned into one vast pasture and the cattle barons could land a 1,200-pound steer in Chicago cheaper than we could grow a real calf. I never like to inquire into my neighbor's business, but I knew that the more beef cattle I had to sell at the end of the year, the poorer I was, so not having a national bank nor a rich father to back me, I had to cast about for another base of operation, so I concluded to make butter. I went to making butter by milking cows of the beef breeds but I did not succeed any better than I did when I tried to cut grass with a header. I soon found the machine was not built that way, so I got a dairy breed, and have succeeded, as I think, admirably ever since. Now, I realize that I am likely to stir up a hornet's nest when I say I could not succeed in the dairy business with cows of the beef breeds and did succeed with cows of the dairy breeds, for there are men that are still talking about the general purpose cow, or all purpose cow. I tell you it is my honest opinion she is a myth. She exists only in your imagination. I can well remember when I was a boy, the manufacturers all over this country were puzzling their heads over a combined reaper and mower, and thousands of them were sold, and never a single one was a success. If it were a good mower, then it was a poor reaper, and vice versa. Now nobody talks about a combined reaper and mower. They are different machines, built entirely different. The same is true of the cow. If she has been bred to convert the food she eats into beef, then she is not good for the dairy. If she has been bred to convert the food she eats into milk, then she is not a good beef animal. So let me say to the man contemplating the production of No. 1 milk and butter, get cows of one, at least, of

the dairy breeds. Then having secured the cows, provide for them good pasture in the summer and good feed and a comfortable stable or barn in the winter. Do not think that you can turn a cow out in the stalk field during the day and alongside of a wire fence at night, and get from her a good yield of milk and butter. That cow has never yet been found. Now, I do not mean to say you shall not turn your cow into the stalk field if you wish during the day, but put her in the barn at night and feed her plenty of corn, oats and clover hay, and rest assured she will give it back with interest, if she is the right kind of a cow. I would urge you to have a barn or stable in which to put your cows for the sake of yourself and the boys, while you do the milking. If there is any one thing above another that will disgust a boy with the farm, it is to send him out into the barn lot to milk the cows, when the mercury is down below zero. Why, the poor cow is almost certain to stand in the coldest place and she is just about as sure to kick, and then if the boy don't say something that would not look well in print, he is morally sure to think it, at least.

Then let me say, when you have gone to the trouble to get cows of the dairy breeds and provided food and stabling for them, then take care of the milk in such a way as to be able to get all the butter out of the milk, and make such an article as will command a good price. As to the method of handling the milk, I will say, I do not believe there is anything quite so good as a separator, but the fact that they are costly and must be operated either by hand or by some kind of power, is a very serious objection to them. So much so that I have never bought one, and would advise any one to think twice before you do. I use the Cooley cans, and where the supply of water is abundant, I do not believe there is anything better. If you have a windmill, arrange your tank so that the water pumped for all the stock will pass through the tank, and you have about as complete a creamery as you need. I shall not enter into the details of making butter; that would take too much time. I will just say that the temperature at which you keep your milk, cream and butter, has more to do with making a gilt-edge article than any other one thing. Having prepared yourself to make a good article, see that you make it each week in the year, put it up in a neat attractive manner, and you will always find a ready sale for it at a good price. I would also urge you to provide yourself with a Babcock tester. They are so cheap and so easily operated and so accurate in their results that no man with half a dozen cows can afford to be without one. Test the milk from each cow, and if you have one that is not paying her way, send her to the butcher. Do not sell her to a neighbor for a milk cow. Test your skim milk and see if you are getting all the cream. Test your buttermilk and see if you are getting all the butter and if you are falling anywhere, change your method. Do not guess at any of these things.

Another thing, do all things in the easiest possible manner if it is just as good. If you can churn with the windmill or by some other power, do that; the butter will be just as good as though one of the boys had churned by hand, and the boy is more likely to like the farm. I have found, after ten years of experience, that there is nothing on the farm pays a better return than the cows, counting the money invested, and I am certain nothing else is as sure. Three hundred and sixty-five days in the year this is a source of income. Like all other things it has its drawbacks. It is something that

has to be attended to regularly. My boys and I milk morning and evening and they go to school, and a boy is more likely to grow up to be a useful man if he is kept out of mischief, and I know of no better way to keep him out of mischief than to keep him at work.

There is, however, another reason why I keep cows, and that is that I may have skim milk and buttermilk to feed my pigs. I do not know what value is really put on skim milk as a food by scientific men, but I do know this, when I have plenty of skim milk for my pigs, I have no trouble to keep them healthy and growing. There is nothing in the wide world that seems to put such a finish on a pig as milk. I really think the by-products from the milk of a dozen cows will pay for all the labor of caring for the cows and the milk and butter.

Now let me say briefly in conclusion, I do not believe any one can farm as successfully without cows as with them. Land has become too valuable to farm it in an indifferent manner. The indifferent farmer must go where he can get cheaper land. You that stay here, must adopt the best possible methods and raise the best possible crops. To do this you must, in my opinion, keep some cows, and good cows, too. Take good care of them, manufacture the milk into gilt-edge butter, feed the by-products to the hogs, and you are on the highway to prosperity.

CHAIR: This paper is now open for discussion.

W. W. McCLUNG: I would make a motion to indorse that paper.

WALLACE: We have had a fine paper from the gentleman from Illinois. I have enjoyed it very much. I would like to ask the gentleman what kind of cows he has finally chosen as the best type for dairying?

CALDWELL: I do not like to answer this question as I might be accused of "talking shop" and trying to advertise my business, but if you insist, I might say, there was a dairy man in our country that was arrested for watering his milk. The jury said he was not guilty, but for him to go home and not to do it any more. This man kept Holsteins, and I do not keep that kind. I am raising the kind of cattle that won at the World's fair. You have all heard of the cow, Brown Bessie, that got the champion record at the World's fair. My cattle are related to this family. I breed Jerseys, if you please.

WALLACE: Do you make steers out of Jersey calves?

CALDWELL: No. I expect some of you will think I am cruel. I make hog feed out of them. I use the axe.

WALLACE: What per cent of butter fat do you lose by your process of setting milk and allowing all the water used on the farm to flow around the cans?

CALDWELL: From October to June less than one-half of 1 per cent. The loss is hardly perceptible. In the summer

when it is hot and the wind does not blow, I sometimes lose 25 per cent.

WALLACE: Is not this loss of 25 per cent a serious matter, and is there no better way of handling your milk?

CALDWELL: The times when I lose 25 per cent only occur once or twice in a season and is only when the wind will not pump any water.

WALLACE: If you can get along with losing 25 per cent less than thirty days in a year, I think you understand your business better than most dairy men, and for this reason it seems to me the use of a separator would be profitable.

CALDWELL: It may be that I am a little lazier than most people but somehow I never feel like harnessing myself up to a separator for two or three hours after doing my other work.

WALLACE: Supposing you were in Iowa on a 160-acre farm and found it necessary to combine both beef raising and dairying, would you select the Jerseys for this purpose?

CALDWELL: I am not conceding that I would want to raise beef.

WALLACE: Suppose that the dairy cows that you had did not consume all the food produced on your farm?

CALDWELL: I would get more cows.

WALLACE: I would like to ask Professor Curtiss if in his experiments at the college farm they have not found that some of these general purpose cows or granger cows, if you please, that being the name I have always given them, they being the cows that are not perhaps the very best for beef or the very best for milk, I would like to ask him if he has not found that these granger cows do nearly as well as the Jerseys in their milk and butter tests.

C. F. CURTISS: I do not care to take time to discuss this question this evening. Our work at the college along this line is now going on. We have at present thirty cows in milk and a careful record is being kept every day in the way of the feed consumed by these cows. Their milk is weighed and tested for butter fat and the cow debited with all she consumes and credited with all she produces, and we have beef breeds in that test. We find there is a great deal of variation in cows of the same breed and not all the good cows are in one breed, by any means. We always found that for the special purpose of dairying, the dairy breeds are the best. That applies to Iowa as well as Illinois, but we do find, however, that there are good dairy

cows in other breeds. We have cows that will do this for several months and at the same time produce calves that go to Chicago and top the market. But they are rare. I want to indorse the sentiments of Mr. Caldwell.

CALDWELL: Do you ever test the different breeds as to the quality of the butter?

CURTISS: These tests were made at the World's fair. We have got a good deal of this theory knocked out of us. The record showed us that there was very little difference in the quality of the butter. The record of that test showed that the butter from the Shorthorns was as high in flavor as the butter from the Jerseys. I think the Shorthorn had better rations. Their butter scored higher in flavor.

W. W. McCLUNG: I move that we adjourn.  
Motion seconded and carried.

DECEMBER 9, 1897, 9:30 A. M.

Meeting called to order by the president.

Recitation by Lois McFadden.

Recitation by school boys.

CHAIR: In the absence of Mr. Wallace, who is out on committee work, the next thing on the program will be a paper prepared by C. Murdock and read by the secretary.

#### WHAT IS REQUIRED OF THE BREEDER OF PURE BRED STOCK.

C. MURDOCK, SLAYTON, MINN.

It ought to be the aim and ambition of each and every breeder of pure bred stock to improve, or at least maintain, the present degree of excellence of his chosen breed. The great object in founding this association, now nearly a quarter of a century old, was to lend encouragement to the breeding of improved stock in Iowa. Since the time this association has been created, hundreds of Iowa's best posted and most successful breeders have mingled in these yearly gatherings from time to time, and have caused the deliberations of this association to attract wide notice from every live stock

quarter in the land. To-day Iowa is recognized as the great live stock state of the Union, and not a little of this distinction which has helped Iowa along the line of permanent prosperity, is due to the Iowa Improved Stock Breeders' association.

The live stock breeding industry has reached a strange era, however, when the public beholds a large per cent of those now engaged in breeding pure bred stock resorting to boom sales, or advertising the progeny claimed to be the get of some noted sire—noted for the long price that somebody was foolish enough to pay, "Only this and nothing more." These and sundry other practices, the employment of a multitude of crack auctioneers for a single sale, long prices paid for single animals by parties with no financial standing at home, who are enabled only to pay such prices on paper, by standing in with the ring, and last, but not least, the complicity of a certain class of the agricultural press, which, while posing as the farmer's friend, stands ready to herald a boom sale, and advertise a questionable transaction, on equal footing and alongside of, men who are depending on strictly upright methods in their business. Honesty, industry and perseverance, are cardinal virtues required of the breeders of pure bred stock. There are a greater number of farmers now than ever before ready to patronize herds of pure bred stock, but they want assurance that they are going to get their money's worth, and are to receive fair treatment.

Many live stock breeders are not content to labor and watch a series of years for the results of painstaking experiments, but seek to attract notoriety by jumping aboard some one's boom and riding on a gallop into fame and fortune. More than a quarter of a century ago the American home of the race horse was considered to be in Kentucky, because a line of stock was developed there by careful, painstaking breeding, and was known to possess merit. The native home of the Poland China race about forty-five years ago, was in southwest Ohio and along the Miami valley, because certain farming communities by a line of breeding moulded a race whose excellence has been recognized. This race of hogs has spread to every quarter of the union because of its true worth. Think of such names written high in the temple of fame in the history of the Shorthorn race, Bates, Collins, Renick, whose lives and works are honored by generations after their time, because of their labors in moulding a great race, not of booming it with the expressed object of unloading at the opportune time on the other fellow.

There is in my judgment, likely to be increased requirements made upon the breeders of improved stock in the near future from both within and outside customers. Land in Iowa has become too valuable, and the average farmer too intelligent, to tolerate the scrub again; and the most practical live stock farmer will choose his breed and stick to that particular breed; cross-breeding will not be resorted to to any considerable extent, and the breeder of pure bred stock will be depended upon for foundation stock at a fairly remunerative price, if it has quality.

Since the last annual gathering, at Fairfield, of this society, made pleasant by the wide awake citizens of that place, the writer has changed his residence to southwest Minnesota, and will be obliged to deny himself the pleasure of mingling in the deliberations of the Iowa Improved Stock Breeders' annual meet this year. We assure our friends that we are with you in spirit if not in the flesh.

Since our location here we have traveled over a considerable portion of the state and have observed the lack of sufficient amount of well bred live stock to take the place of a disastrous and disappointing wheat growing farming.

Iowa breeders in the near future will be called upon to furnish better stock for southwest Minnesota, which is well adapted to live stock farming and invites better breeding to her breeders. This is an excellent grass country and as good a corn country now as upper Iowa was twenty-five years ago. The corn crop here, as in Iowa, will improve with the advent of better and more thorough corn culture. Stock of all kinds has gone into winter quarters in excellent condition.

With a cordial greeting to my Iowa friends and wishing the association a large and interesting gathering at the noted historic live stock breeding center of West Liberty on December 8th and 9th, I beg leave to assure the members that I regret my inability to be present, also my failure to serve out the year as your humble secretary, owing to my removal from the state.

CHAIR: We will now take up the sheep question.

SECRETARY: This subject was assigned to C. L. Gabrielson but I had a letter from him a short time ago saying that he had been called east. Mr. Humphrey Richards has kindly consented to take this subject, and is prepared with a paper.

#### SHEEP AND THEIR FUTURE IN IOWA.

HUMPHREY RICHARDS.

Sheep have been a noted class of animals from ancient history down to our modern times. When we look back in history we find in our sacred book, the bible, that Abel, the son of Adam, was a keeper of sheep. Job is also described as the possessor of an immense number of sheep. Abraham and his descendants were shepherds. King David was also a shepherd; and so on down through the early ages of the world, keeping sheep was an exclusive calling and a profitable industry from the beginning of time; and sheep are found wherever man is found. At the present time, however, sheep are not generally raised in Iowa, but a farm without a flock of sheep is scarcely complete, even in Iowa. There is no other animal domesticated by man adapted by nature to such diversities of climate as the sheep. They are found in every latitude and find subsistence where other grazing animals can scarcely live. Sheep raising has always been of the most valuable assistance to the human race. Think for a moment of the benefit we receive from sheep; the wool, the hide and the mutton. The wool is manufactured into an almost unlimited variety of articles; as clothing, carpets, curtains and other useful and ornamental fabrics. The hide is manufactured into

leather, which is used for various purposes and their flesh is wholesome for food—regarded superior to any other meat.

Sheep industry in Iowa is in its youth. According to the last census this state did not have but 492,875 sheep, but there is a slow increase, and within the last year the demand is increasing rapidly. More inquiry has been made on this line than I have known for the last twenty-five years past, and my impression is that within the next twenty-five years, this state of Iowa will lead in the sheep industry as well as she is now with cattle, horses and hogs. The demand is increasing for mutton all over the United States. More of it is consumed annually at home one year after another; our city people call for more mutton and less pork, and mutton to-day sells higher on Chicago markets than any other meat. Besides this our wide-awake farmers begin to have their eyes open to the necessity of flocks of sheep in order to keep their farms in good condition to produce large crops of corn, as sheep have already proved to be of great benefit to exterminate all kinds of obnoxious weeds that takes our land to-day.

Notwithstanding all of the merits that belong to sheep, it seems there is an impression prevailing among quite a number of Iowa farmers, that sheep raising does not pay. It has been repeated quite often that the land is too high-priced, and the soil is too good to be used for the sheep industry. But if the sheep are handled right there is a profit in them, even in our magnificent state of Iowa. Some people are purchasing sheep and turning them into the pasture, only looking after them at the shearing time, or when the farmer desires fresh mutton for his dinner. Outside of that they are permitted to take their chances of living against the forage of dogs and the inclemency of winter. Such care and treatment does not pay in sheep raising. But let the farmer give it the same relative attention that he gives to his hogs, horses, cattle, or his cornfield and he will find there is abundant profit in sheep raising.

And in order to realize the largest profit, we should have the right kind of sheep to begin with. There is an immense number of varieties of sheep, but the breed that I will consider now will be the Southdown or the Shropshire. I prefer the Shropshire, for the reason that they have larger bodies, and their wool is longer than the Southdown, consequently there is more money in them. It is admitted by the best sheep breeders that the Shropshire are the best paying sheep for Iowa for several reasons.

1. They can stand the weather better.
2. They are good wool producers.
3. Their mutton is superior in quality, and therefore demands the highest market price.

Some of you here, probably, that are not accustomed to sheep, would like to know how many sheep forty acres of ground will keep. There are different opinions on this as well as there are on everything else. One of my neighbors said to me one time that an acre of ground will keep five sheep; but I claim that an acre of ground will keep but two and one-half sheep in an ordinary season, or at the rate of one hundred for forty acres. For winter keeping it requires also three acres of hay, or fodder, to feed them. Now we come to the profit a flock of that number brings—first, the lambs; second, the wool. The wool will net about \$1 each, which will make \$100. Then the lambs will bring \$3 each at four months old, and every

flock of that number should raise 100 lambs if they are taken the right care of. Therefore, that will figure up \$400 of profit made on forty-three acres of land, with but very little labor to be compared to the hard work and great expense of hog raising. Think of the great expense there is in hog raising. The corn has to be raised to feed them, the horses that have to be kept to raise the corn, and also the machinery for the corn and the horses. Besides all of this hard labor required during the whole year for the production of such, at the same time the strength of our soil is absorbed, when otherwise sheep are improving and fertilizing the land on which they feed. With all of this my impression is that the future outlook for sheep is very flattering in Iowa.

CHAIR: We will now have discussion on this paper.

LEONARD: I would like to ask Mr. Richards how many sheep three acres will keep through the winter?

RICHARDS: One hundred.

LEONARD: Will the product on three acres keep them in good condition without any grain?

RICHARDS: Yes.

C. W. NORTON: Will not grain, corn or oats, give an increased weight of life?

RICHARDS: Fodder is good.

C. W. NORTON: What particular breed would you advise?

RICHARDS: Shropshires.

LEONARD: What kind of grass do you turn them on in the summer time?

RICHARDS: I have good grass. I have some timothy, some clover and some blue grass.

LEONARD: There are two ways to keep sheep, feeding well or half starving them. I feed well. You have not one-half enough sheep to the acre. I say that an acre will keep two and one-half sheep the year around. We can carry seven sheep to the acre during the summer on our pastures. I do not want to live where it takes an acre to keep two and one-half sheep in summer.

RICHARDS: I think I have as good grass land as anyone, but I believe in keeping the sheep fat so that they can go to market at any time, and I feed 100 sheep on forty acres.

P. G. HENDERSON: I do not believe these gentlemen disagree as to the number of sheep per acre at all, or but very little. This gentlemen tells us he keeps 100 ewes on forty acres and has 100 lambs that he sells at four months old. Then he has 200 sheep that he has on his forty acres a large part of the season, so there is little difference between the gentlemen as to the number of sheep they keep to the acre.

J. G. BROWN: What kind of sheep does Mr. Leonard breed?

LEONARD: I breed Shropshires.

HENRY MOSHER: I have been farming in this country for forty-five years. I have seen two farmers in the same neighborhood. Each of them had in forty acres of corn. One of these men had 1,000 bushels of corn to sell, the other one kept his corn and fed it to his stock. The man who did not sell his corn had much the larger bank account.

BAKER: I raised sheep for twenty years but I do not know what it cost to keep them. I am out of the sheep business now and raising cattle. Sheep require too much attention every day. They are apt to get too fat and get on their backs, and if not looked after at once they die.

LEONARD: A man that loses sheep by letting them get on their backs and dying is not fit to raise them. I should think Mr. Baker would have found how to keep them from doing this. One morning I found four of my sheep on their backs and one of them was dead. I then went to investigating and found the cause of it. I noticed that the ground in corral was level, and then I remembered that the pasture in which they used to run was gently sloping towards the creek, and I never found any of my sheep in that condition there. I then concluded I had found the cause of the trouble. The sheep while running on the hill-sides, if they became restless, could easily turn over on their feet again, but on the level corral, when they became restless and were rubbing, the wool would matt under their side, and thus prevent them from turning over. Sheep can be raised with less labor than hogs or cattle. They get their living from the pastures and enrich your soil instead of depleting it.

BAKER: Did your sheep ever have the bloat?

LEONARD: Yes, just like the cows when turned on wet grass when hungry. I think it depends upon the quality of the pasture as to how much stock it will carry. Sixty-five acres of bluegrass will keep 100 ewes and their lambs the year around. Sheep are better to improve the ground than other stock. They are more profitable than hogs or cattle.

FRITCHMAN: Mr. Baker tells us that it takes a man with a bank account to go into the cattle feeding business successfully, and that he made money enough in sheep raising to start in the cattle feeding business, which I think speaks well for the sheep industry.

JOHN EVANS: Mr. Baker has spoken of the amount of money he has made in the sheep business. I would like to ask what period in the history of the country was this money made?

BAKER: Not during the years of low prices for wool.

BLACKFORD: I think the average sheep man would like to obliterate those bad years from his memory.

HENRY MOSHER: I have been raising sheep for ten years. Those bad years I kept close watch to see where I was at. The worst year we had my sheep paid expenses and a little more. I kept account and 9 cents was the least I ever got for wool. Two dollars a head at four months old is the least I ever sold lambs for. Any man that raises sheep and takes care of them knows that if he sells lambs at \$2 a head, he is not going to go behind. We did not get behind such years, even at 13-cent oats and 17-cent corn.

LEONARD: For the benefit of those feeding sheep I want to say this: Last spring a year ago I sent \$5 to Henry Wallace to have him send me some rape seed. I received it all right. I received more benefit from that \$5 than anything I ever expended of that kind. The lambs got the benefit of it. I do not know whether it was good rape seed or not, but it brought the lambs out. Last spring I sent \$15 to Des Moines for the rape seed again and sowed it on 60 acres of corn ground. One-half of that amount of seed I have never seen anything of since. Next spring I expect to sow on the oats ground immediately after seeding to oats. I have heard this was a successful way to sow rape. I do not think it is possible that a better ration can be had for sheep than to turn them in the corn field on rape. I do not allow my sheep to be turned into the corn field until the corn is ripe enough to be cut for fodder.

W. W. McCLUNG: I move that this discussion be closed.

Motion seconded and carried.

CHAIR: The secretary will now read the paper prepared by A. J. Lovejoy.

### SOME NEEDED REFORMS AT OUR STATE FAIRS.

A. J. LOVEJOY.

*To the Iowa Improved Stock Breeders' Association:*

GENTLEMEN—As an exhibitor at the leading state fairs of the United States for the past twenty years, and as a member of the Illinois state board of agriculture for the past three years, I have observed many things pertaining to state fairs in general.

It is an old maxim that "time changes all things," yet, perhaps, one of the slowest things to change is the management of state, district and county fairs.

The state fair to be of the greatest value to the public should be more of an educational character and should in the first place be free from any objectionable features, among which may be mentioned shows of a low order, games of chance of every description, fakirs of all kinds, and everything pertaining to vulgarity.

The great Columbian exhibition seems to have set the pace for a diversion in the way of attractions, and nearly every fair association, whether it be state or county, has in various ways attempted to attract the attention of the public by imitating much of the characteristics of the "midway."

I presume I will be looked upon somewhat as a curiosity when I tell you in all candor and truth that while I was in Chicago, during the entire period of the World's fair and visited the exhibition many times—being an exhibitor of swine—that I did not visit the midway plaisance. Not particularly from any conscientious scruples, but from lack of interest or of a curiosity to see anything of that nature, and I have yet to visit a show of any description on our own state fair grounds at Springfield, Ill.

I have been criticised with other members of our state board for allowing such exhibitions on our grounds. I wish to state that our board is attempting to give a clean exhibition, though some objectionable features or attractions did get on to the grounds in 1897; though nothing compared to that of 1896. This came through misrepresentations of the commissioners, when making their contracts for space with the superintendent of permits and privileges. We hope in the future to give an exhibition entirely free from any objectionable features.

There are certain classes of people on the other hand, and many of them the greatest "howlers" regarding this matter, who are the first ones to look up the fake attractions; they crowd around the tent, pay their money, go in and see all there is to be seen. I have even known representatives of the newspapers and agricultural journals, that visited our fair on a complimentary, to go to all the shows, then glance over the fine exhibit of live stock

and then say nothing in their next edition regarding the grand exhibits in the twenty-four departments of the greatest fair in the world, but could write a half column about the vile things that could be seen at our state fair.

I have also seen farmers with their families strike out as soon as they enter the grounds to take in the various shows, and when asked to go and see the fine stock on exhibition, say that they could "see stock enough at home." While there is great need of reform by the management in this matter, there is also a reform needed in certain classes of visitors, who seem to take more interest in the special attractions than they do in trying to learn how to produce the model specimens of live stock seen on every hand, thereby getting some real benefit from attending the fair and go home and improve their methods. It is usually those that most need lessons of improved methods in farming and stock breeding that take least interest in such matters. It is the same trouble with our farmers' institutes; those that need the benefit most either remain away or take no interest in them. Neither do these take the agricultural or stock papers, that have done so much to help make the farm pay, and to make the life of the farmer worth living. The up to date farmer takes several good agricultural papers, attends the farmers' institute and his state fair and many of these associations of various kinds.

But to return to my subject: Some state fairs are adopting the method of cataloguing all exhibits in pamphlet form so that visitors may—if they will—know just what is on exhibition and where it may be found. If in the live stock department, the name of animal, age, breed and owner. When this can be better understood and the advantages appreciated it will be popular with the public. By having a show arena with ample seating capacity free to all, with large bulletin boards on which all awards should be posted plainly as soon as made, then a much more intelligent understanding of what is being done can be determined, and far greater satisfaction be given to both the spectators and exhibitors.

There is another reform that is needed in many of our state fairs: This is a change in the ticket system, and especially in the issuing of complimentary tickets. There are far too many complimentary tickets issued. I am free to admit that a certain number of such tickets are necessary, and should be issued to those entitled to them. Every year brings new associations that ask for such tickets. The last claim in our state coming from the deputy sheriffs, a number of whom made application for them the past fall.

There should at our state fairs be a form of ticket for exhibitors who are often obliged to pass out the gates during the day, after the coupons to their ticket has been torn off during the early rounds of the night watchmen; many are now compelled to remain on the grounds during the whole period of the fair or pay again if they pass out the gate during the day, to get in again.

It seems to me a system of pass checks of some kind should be issued and furnished an exhibitor as he passes out, even though he be obliged to give up his ticket until he returns; any system that would prevent fraud or improper use of such privilege.

#### SUPERINTENDENTS OF DEPARTMENTS.

If there is any man that should always be at his place of duty, it is the superintendent of his department. There is nothing so provoking to an

exhibitor as to be unable to find his superintendent at his office. He has often at some state fairs to hunt the grounds over before finding him. Then probably find him watching a "horse trot." A superintendent of any department of our leading fairs should be a man well posted regarding the exhibits under his charge. He should know the wants of his exhibitors and carefully look after them. He should have plenty of that quality known as "back-bone" for he will, especially if superintendent of any of the live stock departments, need lots of it. He will be approached from all sides by exhibitors who will offer their advice free, as to who should be selected as judge. This will commence oftentimes some three months before the opening of the fair. If the superintendent has done his duty by selecting the best judges he could find, and so informs his exhibitors who so kindly offered him such valuable advice, he will after arriving at the fair be quietly taken aside, and a hint given him that the judge he has taken so much trouble to secure is not just the proper person to pass on the merits of the stock on exhibition; that he should, if he wished to please the exhibitors, change judges. Often such requests come from an exhibitor who, after looking over the different entries, comes to the conclusion that his own entry is a little weak, and so tries to work the superintendent for a change of judges, thinking possibly a friend of his might be selected. This is the time the "back-bone" is necessary, and if the superintendent does his duty he will make no change in his judges, but will back them up. If there is any grave mistake made will find it out, and in the future govern himself accordingly.

While speaking of reforms, there is room for great reform in the general class of exhibitors, the majority of whom will try and work both superintendent and judge. If you are going to yield to this class you might just as well turn your department over to them and let them run it. You must do one of two things: Run the department yours; if or let the exhibitors run it for you.

In this connection I think there should be a reform in the rules governing the entries; especially is this needed in the swine department of most, if not all, of our state fairs. There should be a rule requiring every animal shown in this department to be recorded in its respective herd book. Not only this, but it should require that every entry should be made some ten days before the opening of the show and positively be made on blank forms furnished by the fair association, giving the name of animal, when farrowed, the breeder, the owner, and herd book number and volume; if over a certain age, if a female, the date of last produce. This would at once, if properly enforced, prevent the too common custom of showing animals of improper age, or barren animals in rings or classes where they do not belong. This system is required in the cattle department at our Illinois state fair, of which I am the superintendent.

The entry blank so filled out is sworn to before a notary public and forwarded to our secretary for entry. This insures a clean, smooth running department, and the system should certainly be extended to the swine department.

There was a case at our Illinois state fair last season that will show the necessity of some such rule. An exhibitor, previous to coming to our state fair, borrowed a yearling sow to strengthen his herd before attending the



Illinois state fair. She was brought to our fair and shown in class 527 as sow over 6 months and under 12 months, and received the second premium. It possibly might never have been known, had not the real owner happened to attend the fair and finding his sow had been shown out of her class, made complaint. This is but one of the many tricks worked on the department, and is entirely wrong. There is altogether too much borrowing animals to show, or buying them for thirty days for the same purpose. All animals should be the bona fide property of the exhibitor. By having a rule as above this trouble could all be avoided.

The superintendent that would run his department in this manner might, for a year or two, have a few less exhibitors, but if it became generally known that there could be no crooked work in his department, he would get all the straight, honest exhibitors, and these are all that should be admitted.

There should also be more attention paid to the inspection of swine before being admitted to the grounds. A thorough examination of every animal should be made by a competent veterinary before being unloaded from the cars. This is now being done at some of our fairs and should be at all.

The rule requiring all persons except those in charge of the animals on exhibition to keep out of the show ring while the awards are being made, should be rigidly enforced. Then, after each award is made, let the spectators and all parties interested examine the animals as much as they please, or until the next show is ready to be brought into the ring.

It is very trying for a judge to work with a crowd of people around him and, as is usually the case, each expressing their opinion as to where the award should go.

The fair should be, and is to a great extent, an object lesson, where these interested can gain knowledge in their respective lines of business and go home feeling that it had been a benefit to them, and not with the feeling that—

"For ways that are dark  
And tricks that are vain,  
The state fair exhibitor is peculiar."

CHAIR: This paper is now open for discussion.

THURSTON: Mr. Lovejoy refers to the agricultural papers. Some two years ago about twenty-one newspaper representatives got together and formed an association for the purpose of working for the betterment of agricultural shows. They meant to abolish objectionable places from the fair grounds. With this object in view we gave these places a good write-up last year, and as a result the association did very well last year, except in one instance where we found one of these fake shows, but it had been introduced through a misrepresentation and it was the directors' place to have suppressed it. I think the press should be commended for doing the work it has done. The agricultural papers do not consider that they are receiving gifts

when they receive passes, for the free advertising which they give the societies more than compensates for all favors received. The association of which I am secretary will still continue to fight against these things. We will also do this in the county fairs.

J. G. BROWN: I would like to hear a talk on corn stalk disease.

BROCKWAY: In regard to corn stalk disease, I claim there is no such thing as far as disease is concerned. It is simply a matter of dry feed and want of water. I always make it a point, before turning my cattle into a corn stalk field, to give them plenty of salt, and leave them in but a short time with abundance of water immediately after turning out. I think corn stalk disease is lack of moisture and too much dry feed.

J. W. BLACKFORD: I indorse what Mr. Brockway says. I never turn cattle in the corn field in the morning and at any time when their stomachs are not well filled.

CHAIR: The next on the program is a paper by Henry Wallace.

#### LESSONS OF OUR DRY YEARS IN RELATION TO OUR GRASSES AND PASTURES.

HENRY WALLACE, DES MOINES.

The year 1894 will long be remembered as the year of the great drouth. That drouth really began in the fall of 1893, during which and the winter following the soil was dried out in many fields under cultivation to the depth of three or four feet. The sparse rains never reached through this old drouth, and when the drouth of June and July had exhausted the spring rainfall, the corn crop was almost ruined, and the grass plants of the spring sowing were killed outright. The clover of the sowings of 1892, had for the most part died a natural death, and the result was such a scarcity of forage that the breeding and younger cattle were to a very great extent shipped out of the state. This greatly decreased the demand for pasture the year following, and led to the plowing up of a part of the permanent pastures and a large per cent of the acreage of rotation grasses and meadows as well. As a result of the drouth, in part at least, the enormous crop of 1895 followed on a greatly increased acreage, thus throwing the state out of balance as between crops and stock, to the great disadvantage and loss of the entire farming interests.

We have not yet recovered from this loss, as shown by the scarcity and high price of stock cattle, and the cheapness of corn, even with a crop this year considerably under the average.

It is not likely that the drouth of 1894, will soon be repeated, at least we hope not, but we are liable to have dry seasons, or parts of seasons, in all time to come as we have in all time past. In fact, we are sure to have them, and the practical question which your secretary has asked me to solve by assigning me the above topic, is, What are we going to do about it? I am not wise enough to solve the problem, and will venture only a few suggestions for your consideration.

The first is that we must make a larger use of the permanent pasture. The permanent pasture is the most neglected part of the farm, unless it be the garden and the roadside. It comes to us in Iowa so easily that we do not prize it as we should. We are too apt to regard it as we do a newspaper that is forced on us without money and without price. We have a piece of rough land, or outlying forty or eighty, in wild grass; we scatter a little blue grass seed on it, perhaps do not do even that, put on two head of cattle where about one or one and a half would thrive, and in about three years we have a permanent pasture, a pasture that will stand more drouth than any pasture that has ever felt the touch of a plow. After that it receives no care, no manure, everything is taken off and nothing put on. We pasture it early and late, in fact, all the year around. In a dry time it is our only refuge. We eat it into the ground then, and still it stays with us like an angel of mercy with an impenitent and hardened sinner or a mother's love with a reprobate son. Is it not possible that by the application of manure, by tillage in the way of scarifying the sod bound surface, and by wiser pasturage, we might find in the permanent pasture such increase of production that we could laugh at an ordinary crouth?

Will it not pay us to take some of our better lands out of the rotation, lay them down to permanent pasture, and begin to grow pasture instead of letting it grow itself as best it can? I have no experience to offer on this point, as I have been as great a sinner against blue grass and white clover pasture [as the rest of you. The farmers in my section, however, who stripped their blue grass fields for the seed last summer, have had a very pleasant eye-opener in the fact that they have had more pasture from the acreage during the last half of the growing season than they have had heretofore in the whole season, the result of giving the blue grass a chance to grow a couple of months without being eaten into the ground. The first lesson, therefore, that I would draw is this simple and plain one: Get more and better permanent pastures. Be good to them and they will be good to you.

*Second.*—Give your rotation grasses—the clover and timothy—a living chance. The average farmer gives his grasses the treatment that was in olden time given to the bond boy at a corn husking; he had to stand back and take what the rest might leave. We sow our grasses on the surface and let them take their chances, or we allow lodged oats or other grain to smother them when young, or, if they survive, we keep them pastured into the ground late in the fall, and seem to think that manure is wasted if put on the future pasture or meadow. We give these grasses the treatment that I heard once recommended as the proper treatment for a young preacher, namely: To keep him hard at work in order to teach him industry, and give him a small salary in order to keep him humble, so that as one of the poor in spirit he might be fitted for the kingdom of Heaven. If we are to have

dry seasons, we should learn something of grass culture as well as corn culture. Give the grasses a good seed bed to start with, not stinting the seed. Give them a chance to grow on good land instead of worn out and thin, and then pasture with judgment. I believe we can easily increase our grass crops fifty per cent and thus be proof against dry seasons.

*Third.*—We must increase our acreage of grasses. In view of possible drouth we must grow a surplus of grass. Little harm will be done if some grass goes to waste some seasons. Grass uneaten is like money given to the poor. It is said, although not many of us seem to believe it, that "he that giveth to the poor lendeth to the Lord, and He will surely pay him again." If we really had confidence in that sort of security we would "down with the dust" to a much greater extent than we do. The grass that is not eaten is only lent to the land and it will surely pay us again. About three farmers out of four do not know what a good pasture is until they run short of cattle a year or two and give their pastures a chance to brace up.

*Fourth.*—Securing a larger acreage of better pasture will enable us to grow more stock and better, and feed it until the market is ready, instead of selling short fed cattle on a dragged and declining market. With a smaller acreage of corn we will grow larger crops, and if a drouth comes, as it will, we can cut it up for fodder and thus piece out drouth-stricken hay crops and thus maintain the balance between corn and stock, in which largely lies our financial salvation.

CHAIR: This paper is now open for discussion.

W. W. McCLUNG. I indorse Mr. Wallace's paper. One thing I have observed. A neighbor of mine turned his stock on pasture before the grass had started in the spring and has no good pasture, while those who waited until a good growth had been reached, had abundant pasture all summer. I remember when a boy, my father kept his stock up in the spring two weeks after nearly all his neighbors had turned their stock on grass, and as a consequence his pastures were always abundant. I would rather starve my cattle two weeks in the spring than starve them all summer.

BROOKS: In regard to keeping stock off the pasture in the spring, that is right for the pastures, but every farmer should have a field that has grown up in the fall, upon which he can turn his stock early in the spring while his other pastures are getting a good start, for at this time the stock especially need the grass. I consider blue grass pasture is the best and should never be plowed up.

BROCKWAY: I would like to ask this question, in regard to renewing old pastures: Early in the spring would it not be profitable to sow to timothy and clover on the old pastures?

C. F. CURTISS: We have given our pastures this kind of treatment on the college farm and increased their value 33½ per

cent the first year. We have demonstrated this by going into our pasture fields and fencing off plots, one plot of which we gave this treatment and the other which we did not, and then weighing the grass from each plot. I do not think there is any crop which we neglect so much as the grass crop. We must produce more grass. The blue grass pasture we manured, then disced and sowed clover and harrowed it in and had more clover than blue grass the following year, and increased the value of the pasture 50 per cent. We put in five pounds of clover seed to the acre and on thin sod we sow ten pounds. Disc and then sow the seed. Clover will help blue grass. It draws nitrogen from the air which helps the grass.

WALLACE: I have a drill that I can go into the field and put in seed at any depth I want. The drill will go through the sod. It is a rolling cutter made of the best steel and very sharp. I have put in oats two inches deep when the clover was six inches high and could not find a grain of oats uncovered. I have not tried it on the blue grass yet but I think it will work all right. It is manufactured at Springfield, Ohio.

CURTISS: The disc drill will work all right on the blue grass pastures. We harrow it thoroughly after discing.

JOHN COWNIE: The difficulty I have found is the density of the sod. I cannot secure a good stand of clover at any time in blue grass sod. I make it a rule and have succeeded so far successfully, to allow the clover and timothy to go to seed in my pasture field. I should favor a regular rotation of crops in each and every field. I seed with barley, rye and winter wheat. Barley is the best and oats the worst. I have tried seeding alone and was not pleased with the result. I use a combined seeder and sow grain and grass equal depths. I think one great mistake made is to sow the grain and leave the sowing of grass until later.

WALLACE: I would not take Mr. Cownie's advice in this matter. It may be all right for him. It is all right for light soil, but it would not do with any clay soil. The best chance to get a stand of clover is to sow it in the spring on fall rye and pasture your rye down until it will not make more than one-half a crop. The next best plan is to sow on winter wheat on the last snow. Generally about the first of March it is safe, or if later, then harrow in. Or sow with spring wheat or oats. Use an early stiff standing oats. You will get a better stand with that because it is light, stiff straw and matures earlier and does not fall down.

NORTON: I do not think that we can afford to plow up our pastures often as it takes so long to get them well established, and they become better and better the longer they are left undisturbed. In England they do not think of plowing up their pastures for a hundred years. Our pasture at home is unusually short for the time of year, as the unprecedented drouth of the past season cut them short. But like my friend Baker, I aim to have grass enough for two and only one to eat it. I recall an incident in my experience. A neighbor of mine came in excitedly telling my folks that my stock had got in my meadows. My wife told him he was mistaken as they were only in their usual pasture, and that is the way we try to keep them.

COWNIE: I was not raised in England, as Mr. Norton thinks, but in Scotland. Where I was raised, in the southern part of Scotland, there was no such thing as the permanent pasture. It was the universal practice where I was raised, to never allow a field to remain in grass more than three years. I have tried to adopt the same policy here but it is utterly impossible, owing to our difficulty in getting a stand of grass very often. Our soil will not permit it. With us, in Scotland, as soon as our seed touches the ground it begins to grow, owing to our moist climate. I am in favor of keeping as near a rotation of crops as we can. It is not difficult to raise from sixty to eighty bushels of corn after it has been three years in pasture. I have learned this much in the last few years. Our soil has this characteristic; you will not add one particle more of plant food if you will leave it in grass for fifty years, than you will secure in three years.

BROOKS: I would like to ask this question: What do you do to get rid of the redtop in your grass land?

BAKER: We do not want to get rid of it. It makes the grass better.

WALLACE: There is one peculiarity about redtop; in the southern portions of the state it is virtually a weed, and of no value for stock; but in other portions of the state, and in fact the further north you go, the better it gets, and I am convinced that in some sections it is the best grass the farmer has.

On motion the meeting adjourned to meet at 1:30 at the pavilion.

#### AFTERNOON SESSION.

Meeting called to order by the president at 1:30, at the sale pavilion.

CHAIR: We will now listen to the report of the secretary and treasurer.

## RECEIPTS.

By membership at Fairfield.....	\$ 77.00
By enrollment, Dr. J. C. Shrader, Iowa City.....	50
By enrollment, ex-Gov. S. B. Packard, Marshalltown.....	1.00
By enrollment, Dan. Sheehan, Osage.....	1.00
By enrollment, ex-Governor Larrabee, Clermont.....	1.00
By enrollment, W. M. McFadden, West Liberty.....	1.00
By enrollment, W. W. McClung, Waterloo.....	1.00
By one book sold.....	.25
By overdraft reported by C. Murdock.....	17.32
Total.....	\$ 100.07

## EXPENDITURES.

To paid postage, November, 1895.....	.20
To paid postage, December, 1895.....	.18
To paid expressage from Atlantic.....	.45
To paid postage, January, 1896.....	.25
To paid express on matter for state printer.....	.25
To paid postage.....	.10
To paid postage on eighty-three books sent June 20th to members	7.50
To paid postage for June.....	.10
To paid traveling expenses of secretary.....	4.75
To paid postage and stationery for October.....	.66
To paid postage on program for November.....	1.45
To paid postage for November.....	.48
To paid 500 programs.....	4.00
To paid stenographer, December 10th.....	30.00
To paid railway fare from Waterloo to Fairfield and return.....	9.40
To paid hotel at Fairfield.....	4.10
To paid printing program for 1894.....	2.75
To paid secretary's salary for 1896.....	25.00
To paid postage for December, 1896.....	.55
To paid postage for January to February, 1897.....	1.05
To paid postage from February to September.....	.97
To paid postage on eighty-four books sent to members.....	5.88
Total.....	\$ 100.07

Overdraft from Murdock.....	\$ 17.32
Postage to send programs.....	2.15
Express package from Murdock.....	.45
Postage September to December.....	2.90
Total overdraft.....	\$ 22.82
Secretary's salary, 1897.....	25.00
Total.....	\$ 47.82

J. P. MANATREY: I move that we adopt this report.  
Motion seconded and carried.

CHAIR: We will now have the report of the committee on resolutions.

Your committee appointed to draft resolutions expressing the views of the members of the Iowa Improved Stock Breeders' association, beg leave to submit the following:

WHEREAS, The people of Iowa are groaning under the burden of taxation for state, county, city, township and school district purposes, and

WHEREAS, Recent investigations have shown that even in the agricultural counties there are from twenty to thirty thousand dollars lying idle, and a much larger amount of school funds, which are used by the banks without interest, or by the treasurers and their friends, in violation of law, to the great loss of the tax-payers and to the detriment of public morals, therefore be it

Resolved, That we demand of our legislature the enactment of laws reducing all levies to a point that will prevent any accumulation of a surplus to remain idle, or to be used for illegal purposes or speculation by those charged with the custody of the funds.

Resolved, That we are in favor of the enactment of such laws as will make it compulsory that printing and binding, the purchase of supplies, etc., by state or counties, be duly advertised and let to the lowest responsible bidder. And we also favor such readjustment of all salaries of public officers, from the highest to the lowest in the state, as will conform to the changed financial condition now existing, and place the same upon a truly business foundation.

WHEREAS, The ravages of disease among swine has caused serious loss to the farmers of the state, and each and every so-called hog cholera cure has proved of no value when put to an honest test, and the sale of these medicines is now assuming such proportions as to threaten to be as serious in its results as the disease, in robbing those whose misfortunes are already too great; therefore be it

Resolved, That the advertising of so-called preventive specifics and sure cures for hog cholera in agricultural papers is a fraud upon the public, which merits our most severe condemnation. But we are heartily in favor of such national or state investigation into the nature and cause of the disease now destroying the swine industry of our state, to the end that a true knowledge of its character may be ascertained and proper means taken to eradicate it. And we also recommend that the State Agricultural society take cognizance of epidemic diseases among swine, and make such appropriation as may be necessary to ascertain the truth if possible in regard to the so-called hog cholera.

Resolved, That the present laws in regard to our State Agricultural society and kindred institutions, should be radically changed, to the end that the state board of agriculture should have a higher purpose than merely holding a fair each year. And we favor uniting the dairy, veterinary, farmers' institute, weather and crop service, etc., into a state board of agriculture, that shall prove thoroughly educational in all its branches, and thereby promote to the fullest extent the material prosperity of the agricultural interests of our state.

*Resolved*, That we most emphatically disapprove of the action of the executive council of the state in its attempt to remove the State Agricultural society from the rooms specially prepared and assigned to its use by the legislature when the capitol was erected. And we earnestly request that our representatives in the next general assembly confirm their right to the occupancy of said rooms.

*Resolved*, That the thanks of this association are hereby tendered the citizens of West Liberty and the surrounding country for their hospitality and the many acts of kindness extended during our meeting, and we desire to assure them of our appreciation of the courtesies extended and that we will carry to our homes pleasant recollections of this, our twenty-fourth annual meeting.

CHAIR: What shall we do with this report?

CURTISS: I move we take up the report by sections and act on it.

Motion seconded and carried.

Section 1 was then read by Henry Wallace, as follows:

WHEREAS, The people of Iowa are groaning under the burden of taxation for state, county, city, township and school district purposes; and,

WHEREAS, Recent investigations have shown that even in the agricultural counties there are from twenty to thirty thousand dollars lying idle, and a much larger amount of school funds which are used by the banks without interest, or by the treasurers and their friends, in violation of law, to the great loss of the tax-payers and to the detriment of public morals; therefore be it

*Resolved*, That we demand of our legislature the enactment of laws reducing all levies to a point that will prevent any accumulation of a surplus to remain idle, or to be used for illegal purposes or speculation by those charged with the custody of the funds.

WALLACE: I move the adoption of this section.

BROOKS: I would move to amend this section by saying that this state of affairs exists in some of the counties.

Motion seconded.

BROOKS: I am in favor of the sentiment of this resolution, but I do not conform to the statement quite as it is. It is too broad. I would like to restrict it to some of the agricultural counties. I am certain this is not the case in our county. I can illustrate this by the manner in which we conduct the affairs of our school district. It has for a number of years been our custom to have the account as much over-drawn just before the taxes came in in the spring as the balance on hand amounted to after the receipt of the spring taxes. There is this feature of public business which you must remember, the bills of a county or of a school district come in at all times of the year. It is not feasible or possible to collect the taxes to

pay a bill when it is presented. This makes it necessary to collect enough to carry along the business from one time of collection to the next.

W. C. EVANS: I think the preamble is too sweeping in its declarations. It is not based on fact therefore I favor the amendment.

BROOKS: Is it a fact that there are treasurers illegally using the funds in their hands?

WALLACE: It is a fact. Probably I was hasty in declaring this the case in all counties, and I will, therefore, accept the amendment offered by Mr. Brooks.

W. C. EVANS: Will Mr. Wallace please state to the meeting some of the counties on which this declaration has a bearing?

Mr. Wallace then named a number of counties in which his statement was verified by figures.

COWNIE: There are facts submitted in regard to this question that seem to convince us that there are counties and districts in the state where the levy is too large. In some districts the taxes are levied to the extreme limit of the law and a surplus results which is unnecessary and a burden upon the tax payers.

Chair called for a vote on the motion, which was declared lost.

Section 2 was then read, as follows:

*Resolved*, That we are in favor of the enactment of such laws as will make it compulsory that printing and binding, the purchase of supplies, etc., by state or counties, be duly advertised and let to the lowest responsible bidder. And we do favor such readjustment of all salaries of public officers, from the highest to the lowest in the state, as will conform to the changed financial condition now existing, and place the same upon a truly business foundation.

BROOKS: I move we adopt this part of the resolution.

BENNETT: I second the motion.

Motion carried.

Section 3 was then read, as follows:

WHEREAS, The ravages of disease among swine has caused serious loss to the farmers of the state, and each and every so-called hog cholera cure has proved of no value when put to an honest test, and the sale of these medicines is now assuming such proportions as to threaten to be as serious in its results as the disease, in robbing those whose misfortunes are already too great; therefore be it

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*Resolved*, That we demand of our legislature the enactment of laws reducing all levies to a point that will prevent any accumulation of a surplus remaining idle, or to be used for illegal purposes or speculation by those charged with the custody of the funds.

WALLACE: I move the adoption of this section.

BROOKS: I would move to amend this section by saying that this state of affairs exists in some of the counties.

Motion seconded.

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BROOKS: I move we adopt this part of the resolution.

BENNETT: I second the motion.

Motion carried.

Section 3 was then read, as follows:

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disease now destroying the swine industry of our state, to the end that a true knowledge of its character may be ascertained, and proper means taken to eradicate it. And we also recommend that the State Agricultural society take cognizance of epidemic diseases among swine, and make such appropriation as may be necessary to ascertain the truth, if possible, in regard to the so-called hog cholera.

J. A. EVANS: I move we adopt this section of the resolutions.

McCLUNG: I want to oppose this resolution. For a number of years I have at different times been at meetings of this kind where there have been some resolutions passed. The only good I ever knew them to do was to advertise these remedies. Hog cholera is very much like the Bible describes the wind. "It bloweth where it listeth, and we can hear the sound thereof, but canst not tell from whence it cometh or whither it goeth." I do not think there is a man in the state of Iowa that knows anything about hog cholera. There never has been anything new said. I am in favor of letting hog cholera alone so far as this meeting is concerned.

BROOKS: Generally speaking, I think this is correct, but I am not over-persuaded but what a resolution of this kind might do some good. Inside of the last two weeks a manufacturer came to a man in our town and offered him the sum of \$1,000 simply to accept the presidency of a little concern organized to manufacture hog cholera remedies. The money was offered to simply use his name. It was to catch suckers, and I think a resolution from a body of representative men like this, condemning the remedies, would have some influence upon the farmers of this country who do not take the time to investigate. There is no need to pass such a resolution for the benefit of a body of men like we have here, but for the benefit of those farmers who stay at home and do not read, I think a resolution of this kind would cause them to stop and think and then investigate a little before they threw money away on some worthless remedies.

COWNIE: I have had some experience with hog cholera specific, and you would be surprised at the number of letters I have received from all sections of the country, urging me to send them a remedy, to send at once, to send by express, and some even wanted me to send by telephone. I want this resolution passed. I do not want the people of Iowa to be deceived. I think it would be a benefit to the farmers of Iowa to have it passed.

J. A. EVANS: Did I understand you to say you had received letters from manufacturers asking you to take the agency for some of these remedies?

COWNIE: I have received a great many such offers. One manufacturer wanted me to go into partnership with him. He said the remedy would cost us 15 cents a barrel, and we could sell it at \$2.50 a gallon.

Motion to adopt resolution carried.

Section 4 was then read, as follows:

*Resolved*, That the present laws in regard to our State Agricultural society and kindred institutions, should be radically changed, to the end that the state board of agriculture should have a higher purpose than merely holding a fair each year. And we favor uniting the dairy, veterinary, farmers' institute, weather and crop service, etc., into a state board of agriculture, that shall prove thoroughly educational in all its branches, and thereby promote to the fullest extent the material prosperity of the agricultural interests of our state.

Moved and carried that this section be adopted.

Section 5 was then read, as follows:

*Resolved*, That we most emphatically disapprove of the action of the executive council of the state in its attempt to remove the state agricultural society from the rooms specially prepared and assigned to its use by the legislature when the capitol was erected. And we earnestly request that our representatives in the next general assembly confirm their right to the occupancy of said rooms.

Moved and carried that this section be adopted.

Section 6 was then read, as follows:

*Resolved*, That the thanks of this association are hereby tendered to the citizens of West Liberty and the surrounding country for their hospitality, and the many acts of kindness extended during our meeting, and we desire to assure them of our appreciation of the courtesies extended, and that we will carry to our homes pleasant recollections of this, our twenty-fourth annual meeting.

WALLACE: I will now offer the following resolution in the place of section 1:

*Resolved*, That this association favors the enactment of a law requiring the deposit of public money in such banks as will pay the highest rate of interest on average balances, and give ample security.

Moved and carried this section be adopted.

CHAIR: The next is the report of committee on nomination of officers.

W. W. McClung read the report, as follows:

Your committee on election of officers present the following officers for 1898:

*President.*—John Cownie, South Amara, Iowa.  
*Vice-Presidents.*—First district, W. P. Young, Mt. Pleasant; Second district, John A. Evans, West Liberty; Third district, W. W. McClung, Waterloo; Fourth district, Dan Sheehan, Osage; Fifth district, Andrew Davidson, Monticello; Sixth district, J. R. Crawford, Newton; Seventh district, Prof. C. F. Curtiss, Ames; Eighth district, Dan Leonard, Leonard; Ninth district, Geo. W. Franklin, Atlantic; Tenth district, R. J. Johnston, Humboldt; Eleventh district, H. G. McMillan, Rock Rapids.

*Secretary and Treasurer.*—W. M. McFadden, West Liberty.

W. W. MCCLUNG,  
 E. C. HOLLAND,  
 J. N. DUNN,  
 W. M. LAMMING,  
 J. R. CRAWFORD.

On motion report was accepted.

CHAIR: The next will be the report of the committee on location.

E. C. Bennett read the report, as follows:

We, the committee on location, recommend the acceptance of the invitation of Iowa City to hold the next meeting at that place.

C. S. BARCLAY,  
 J. P. MANATREY,  
 E. C. BENNETT,  
 C. W. NORTON,  
 J. M. ERION.

Moved and carried the report be accepted.

C. F. CURTISS: I do not want to take exceptions to the report of the committee. It has been suggested by several that the next meeting be held at Ames. The people of Ames do not care to make any contest for this place, but our larch string is always out, and the association has a standing invitation to hold meetings there. We have twenty-four breeds of live stock at the college farm, and other features that I think would make it an attractive and interesting place to hold a meeting, but if it is the wish to hold the next meeting at Iowa City, it is all right.

SHRADER: I assure you in behalf of the people of Iowa City that the next meeting will be made as pleasant and profitable as possible.

BROCKWAY: I think the Iowa City people will stand firmly by the association. They will be welcome.

MCCLUNG: There will be a hot time in the old town when we get there.

The next on the program is a paper by J. C. Shrader.

*Mr. President and Gentlemen:*

The duties of the state and national government in respect to the diseases of live stock, have been assigned to me, to furnish a few thoughts for reflection.

The interests are so vast, and the views of stockmen so various, and the almost total indifference to these great questions by politicians so complete, that but little has heretofore been accomplished; or perhaps I should say, that which has been done is so entirely inadequate to these great interests that it would seem to me that the subject had been almost entirely overlooked. Let us for a moment glance at the great subject involved. From the Atlantic to the Pacific, and from the gulf to the frozen north, the interests of this great region, the most fertile spot on God's green earth, is devoted to agriculture, and the greatest one of the varied interests of all this region, of all the agricultural interests, is the raising of stock. It is only within a comparatively short period that the attention of stockmen has been directed to the improvement of the different breeds of horses, cattle, sheep and swine. It is only a few years since that the broncho, the wild Texas steer, the razor-backed hog, or the coarse-wooled sheep, were the only ones to be found among the farmers and stockmen of this vast region. But now behold the change. Stockmen are everywhere vying with each other in producing the finest breeds that can be obtained, and the continual selection of the choicest animals has developed herds that now constitute the great wealth of the nation. Only a few years ago men crossed the ocean to secure choice animals for breeding purposes, but now, this is no longer necessary. By this careful selection of the parent stock, this country can and does compete with any nation on earth. But what are we doing to protect these vast interests?

It is true that by the aid, or through the combined influence of men interested in raising fine stock, combining themselves into societies, such as this and many others of kindred character, the people are becoming awakened to the importance of this great and growing industry. You have succeeded also within the past few years in getting our law-makers aroused and this interest has now been endowed with a portfolio at the seat of government, and raised to a cabinet position, and at last, a wise man placed at its head; a man from the people, a man who understands the needs of this great industry, fearless in defense of its importance and rights, who has been, and who will continue to call upon the congress, to come to his assistance in protecting this great interest (especially at this time), from the ravages of disease. Much has been done, but more remains to be done. Scientific men are investigating the causes of anthrax, pluro-pneumonia, Texas fever, the swine plague or cholera, trichinosis, glanders, farcy, rabies, tuberculosis and many more of these direful plagues, that from time to time infect our herds.

It is true we have been making some progress. We can now prevent anthrax from spreading, and can, by following up the proper means, stamp it out. But much more remains to be done. We are only on the threshold of these important discoveries and investigations. Now it takes able,



learned and wise men, men who can and will devote their lives to studying these diseases, to be able to understand and prevent them. We must also have well equipped laboratories, supplied with the latest and best instruments of the finest workmanship, to be able to detect those minute organisms that cause the direful ravages among the fine herds of the great valley of the Mississippi.

Now, these things cannot be accomplished, even what I have outlined here, without money, and a great deal of money, too. The diseases are so various, so destructive and intricate that when once we have an outbreak or even an endemic attack, without its becoming epidemic, a large amount of property is lost in so brief a period that before the farmers and breeders become aware whole herds are devastated. Let us look at any one of the diseases named, say swine plague or cholera. Year after year it is devastating the fine herds of the great corn belt of the west. We can hardly estimate the amount of the loss, reaching into millions of dollars annually. Some of the brightest minds of the state and nation have been investigating this disease, and it has also had the fostering care of the Bureau of Animal Industry, it having detailed some of the able men employed there in its investigation, and still we have not been able to say we have found the germ, or at least discovered the remedy. Untold wealth awaits the discoverer of even the certain remedy for this one disease. The scope of this article would hardly allow me to call attention to the great number of diseases and the means of remedying each, even if not the cure, the best methods of prevention. For in some of these diseases and in most, all we can do at present is to try and prevent their introduction.

Take one more disease for illustration, that of tuberculosis. It is spreading all over this great region. There is scarcely a township that the disease has not reached. Oh, you will say, your estimate is far too high. But is it? Ask our state veterinary surgeon, and you will be surprised at the number of infected animals that is found to yield to Koch's tuberculin test. Now, all that we have been able to do as yet is to apply the test to detect the disease. We have not yet, with all the study that has been given to this subject, been able to find a cure for the scourge of both men and animals. It is well termed the great white plague. The number of lives lost from this disease alone is appalling! Every seventh death is due to it. How is it possible to control the disease in the human family, while the germs are being constantly furnished in the milk we drink and the meat we eat?

Some governments have been prohibiting the importation of our hogs and cattle, and to protect our foreign trade we have been compelled to inspect our pork for trichina and our beef for tuberculosis. Now, if it is so important to protect our trade with foreign countries, how much more to protect our own people? Why do we not call upon our state and national governments for protection? Why should diseased food products be allowed to be sold to the people? It is true some few states are becoming alive to the importance of this subject. I might mention that in the states of New York and Massachusetts the legislatures have appointed commissioners whose duty it is to inspect the cattle. Those found infected are killed and the meat condemned and prohibited from sale. In our own state the most that is being done is by the public health association and state board of

health. The state veterinary surgeon can, when called or sent by the governor, inspect the herds and condemn them, but he has not the authority to kill the diseased animals without the consent of the owner. The state board of health has been calling the attention of the people to the great danger from tuberculosis, and advising them to use greater precautions in their diet and in their intercourse with persons suffering from the disease.

In a paper at the late international medical congress, at Moscow, Russia, Professor Vaughn, of the University of Michigan, in relation to this subject said that no milkman should sell milk without license from the municipality; this permission should not be given until the cows have been inspected by a competent veterinary surgeon. The tuberculin test should be applied to every animal, and any found suffering from tuberculosis should be destroyed. Professor Sender, of Germany, also said in relation to the great mortality in the human family from consumption, there are in Germany 1,200,000 persons affected, and that 150,000 die every year. He estimates the annual mortality in Europe as upwards of 1,000,000 persons from this cause alone.

Now, after this brief survey of the great loss of life and property from disease of our domestic animals, what means shall we adopt to prevent this? What shall our state and national governments do to protect the people? For as I have shown the loss is not one of property alone, but our lives, and the lives of those dependent upon us are in constant danger. Are we not already guilty of great negligence? Is it not time for us to cry aloud, and stay not in our calling, until the ears of our law-makers are made to tingle, to burn, until some laws are enacted to protect the people? Learned and wise men must be employed to study these diseases. Money in sufficient quantities must be appropriated to pay these men for their services, until the means of recognition and the proper remedies are found to control them.

Impure milk and meat must be absolutely prohibited from sale.

This great and increasing danger to the people should be prevented.

Our fine stock association should assist the state board of health in enlightening the people, in arousing them from the lethargy that has overtaken them. We must arouse the people first, and then we may hope our law-makers will pass wise and strigent laws in regard to this great industry. Every herd of cattle in the state should be inspected by our state veterinary surgeon or his deputies, with Koch's tuberculin, and authority should be given them, or to a board of commissioners appointed for that purpose, to destroy every infected animal. Provision should be made to pay for the animal so destroyed. This would cost a great deal of money, but are not the lives of the people worth vastly more than the cost? Money consideration should not be placed in the scale with life and health.

CHAIR: The paper is now open to discussion.

As there is no discussion on this paper we will now listen to Professor Curtiss.

## POINTS OF EXCELLENCE IN BEEF CATTLE.

PROF. C. F. CURTISS

*Gentlemen of the Iowa Improved Stock Breeders' Association:*

A brief consideration of the qualities of practical excellence in beef cattle may well engage the attention of the breeder and feeder. A topic of this character is too often regarded as of interest only to the professional exhibitor, or the lecture room instructor and student; but in this field every successful breeder must always be a student, for the first essential in successful breeding is a clear conception in the mind of the breeder of what constitutes a good animal, and of all the characteristics that go to make up real excellence in a herd or flock. It is said that the late renowned Amos Cruickshank, the founder of the great Scotch tribe of Shorthorns, was often seen by the side of the leading sale rings of Great Britain, intently studying every animal that came into the ring, and his minute knowledge of all the animals brought out was the marvel of those who chanced to converse with him about them afterward.

And while the methods of the first great improver of live stock were largely secret, it is known that the justly celebrated Robert Bakewell was not only an exceedingly close student of living forms, but that his rooms were also full of models and parts of domestic animals that he had carefully dissected and studied piece by piece, and preserved in alcohol for future reference. In his work of selection and improvement, he imparted to the Leicester sheep such a remarkable aptitude to take on flesh that this quality remains a characteristic of the breed to a greater degree than any other long-wooled breed of England, even to the present day.

I invite your attention to this subject on account of its general importance to the beef producer as well as the breeder of show ring and sale stock, for I contend that the show ring type must necessarily keep close to and be largely governed by the practical demands imposed by the feed yard and the block; or else the lessons of the show yard and sale ring are without value, if not positively misleading. No one is more concerned in what constitutes the essential qualities of a good beef animal than the man who breeds and feeds for the block, for it must be kept in mind that this is the ultimate end of all beef stock, and the best beef animal is the one that carries to the block the highest excellence and the most profit. This, gentlemen, is in a word, the keynote of the whole problem, and if we do nothing more than look squarely at this subject in the right light, we will have made a good beginning. It means everything in the live stock business, to begin right, to be travelling upward—to just be headed in the right way. To be headed the opposite way is fatal.

To begin with, there is a well defined beef type that admits of less flexibility than is generally regarded. We hear much about the dairy type, and there is a dairy type, fairly clean cut and well defined, but I want to say to you that there is also a beef type, more rigid and less variable than



HIGH GRADE SHORTHORN STEER.

Raised as a skim-milk calf by the Iowa Experiment Station.



HIGH GRADE HEREFORD STEER.

Fed and marketed by the Iowa Experiment Station.

the dairy type. Your own observations and experience will bear me out in this assertion. You all know that there are not a few cows of quite positive beef tendencies capable of making very creditable dairy records, and a great many that combine milk and beef to a profitable degree, but can you recall an instance of a good carcass of beef ever coming from a steer of a pronounced dairy type or breed? So clearly and definitely is this beef type established that to depart from it means to sacrifice beef excellence.

Here are some illustrations that pretty accurately represent the ideal beef type. The first is a good reproduction from a photograph of a high grade Shorthorn steer, raised as a skim milk calf at the Iowa experiment station. He was the best steer in the Chicago yards on a day when there were 26 000 cattle on the market. The next is a high grade Hereford steer, fed at the Iowa experiment station, that was good enough to easily top the market, and was one of five to dress an average of 67.05 per cent of net beef. He weighed when two years old 1,620 pounds. I also have here a standard of excellence that I have formulated for the use of students in judging beef cattle.

## IOWA AGRICULTURAL COLLEGE DEPARTMENT OF AGRICULTURE.

## STUDENT'S SCORE CARD—BEEF CATTLE.

SCALE OF POINTS.		Possible score.	POINTS DEFICIENT.	
			Student's estimate.	Revised.
<b>(a) GENERAL APPEARANCE: 25.</b>				
Weight—estimated . . . . . lbs; actual . . . . .		10		
Form, smooth, even, parallel lines, deep, broad, low set . . . . .		10		
Quality, thick, covering of firm flesh; mellow touch, soft, heavy coat; fine horns, velvet-like skin . . . . .		5		
Style, vigorous, strong character, active, but not restless . . . . .				
Objections, rough or angular in form, harsh coat, hard skin, dull appearance . . . . .				
<b>(b) HEAD AND NECK: 10.</b>				
Muzzle, broad; mouth large, jaws strong, nostrils large . . . . .		3		
Eyes, large, clear, placid . . . . .		3		
Face, short; quiet expression . . . . .		2		
Forehead, broad, full . . . . .		2		
Ears, medium size, fine texture . . . . .		2		
Neck, thick, short and full; throat clean . . . . .				
Horns, fine texture, medium size or small . . . . .				
Objections, long or lean head and neck, dull eyes, coarse, heavy horns . . . . .				
<b>(c) FOREQUARTERS: 10.</b>				
Shoulders, covered with flesh, compact on top, smooth . . . . .		4		
Brislets, prominent and wide . . . . .		3		
Loincap, full skin not too loose and drooping . . . . .		3		
Legs, straight, short; arm full, shank fine, smooth . . . . .				
Objections, bare shoulders, narrow on top, contracted brisket, coarse legs . . . . .				
<b>(d) BODY: 25.</b>				
Chest, full, deep, wide, girth large, crops full . . . . .		8		
Ribs, long, arched, well covered with firm flesh . . . . .		10		
Back, broad, straight, smooth and even . . . . .		4		
Loin, thick, broad, full . . . . .		4		
Flank, full, even, with underline, or nearly so . . . . .				
Objections, narrow or sunken chest, hollow crops, sloping ribs, bare or rough back and loin, high flank . . . . .				
<b>(e) HINDQUARTERS: 20.</b>				
Hips, wide, smooth, well covered . . . . .		5		
Rump, long, even, wide, smooth not patchy . . . . .		4		
Pin bones, wide apart, smooth not patchy . . . . .		4		
Thighs, full, deep and wide . . . . .		3		
Purse, full, deep, large, level with flank or nearly so . . . . .		4		
Legs, straight, short, shank fine, smooth . . . . .				
Objections, prominent rough hips, narrow, bare rump, spare thighs, light twist, small purse, coarse legs . . . . .				
Total . . . . .		100		

Animal . . . . .

Student . . . . . Date . . . . .

I regard the score card as an educator and of great advantage to the student, but I do not favor its use in the show ring. The judge who goes into the show ring should carry a clean cut mental conception of a good animal, and the qualities that are objectionable. This applied to the animals of a ring virtually amounts to the use of a score card without the objectionable features of that system. In recommending the score card to the student, I use the term student in its broadest sense, embracing not

only the prospective breeder within the class room, but every member of the great practical school as well, who wishes to keep in the foremost rank of his profession. One of the prime causes why so many men fall in this field is the lack of a thorough study of the essential characteristics. In other words, and to put it more plainly, breeders fail to breed good animals because they do not know what good animals are.

I will only endeavor to call your attention at this time to some of the more important characteristics enumerated in the score card, as my time will not permit me to take up this subject in detail.

The first thing that should be looked to is the general beef form—low, broad, deep, smooth and even, with parallel lines. No wedge shape is wanted for the block.

Next in importance is a thick, even covering of the right kind of meat in the parts that give the high priced cuts. This is a very important factor in beef cattle that is often overlooked. Here is a drawing representing the wholesale method of cutting beef, showing that about 23 per cent of a good carcass of beef sells for nearly 64 per cent of the total value. The



high priced cuts are the ribs and loins. These parts on an average sell for about three times as much per pound as the others. Good broad, well covered backs and ribs are absolutely necessary to a good carcass of beef, and no other excellencies, however great, will compensate for the lack of this essential.

It is necessary to both breed and feed for thickness in these parts. And mere thickness and substance here is not all. Animals that are soft and patchy, or hard and rolled on the back, are sure to give defective and objectionable carcasses, even though they are thick, and they also cut up with correspondingly greater waste. The men who buy our cattle and fix their market value, are shrewd enough to know almost at a glance how much and just what kind of meat a steer, or car load of steers, will cut out, and if the producer overlooks any of the essential points, he is compelled to bear the loss.

Then, in addition to securing the general beef form and make up, together with good backs, ribs, and loins, there is a certain quality, character, style, and finish, that constitute an important factor in determining the value of beef cattle. One of the first indications of this is to be found in the skin and coat. A good feeding animal should have a soft mellow touch, and a fine, but thick and heavy coat. A harsh, unyielding skin is an indication of a sluggish circulation and low digestive powers. The character and finish exemplified by a clear, prominent, yet placid eye, clean cut

features, fine horn, and clean, firm, bone, all go to indicate good feeding quality and a capacity to take on a finish of the highest excellence, and consequently to command top prices. I would not tolerate too large or too coarse bone. Coarse boned, rough animals are almost invariably slow feeders and hard to finish properly. A certain amount of size is necessary, but it should be obtained without coarseness. The present demand exacts quality and finish rather than size.

Besides these qualities, and above all, it is necessary to have vigor and constitution. We find evidence of these in a wide forehead, a prominent brisket, broad chest, full heart girth and general robust appearance; and without them other excellence will not have its highest significance.

And now, gentlemen, while I have urged the importance of those things which go to make up a finished carcass of beef of the highest value, and while, as I have stated, the block is the ultimate end of all beef cattle, I want also to state that undeveloped breeding stock cannot at all times be expected to measure up to this standard. And right here I want to say a word about our present system of show-yard competition. I believe that every fair and live stock exhibition should have its fat stock classes, and that these should be taken as the standard of the finished product. They will afford the most practical and useful lessons to be gained by the show, and the stock brought out for them will represent the culmination of the highest excellence that can be attained. The competition will be a measure of everything at its best, and in it every animal will rightly be rated according to what it is capable of producing on the block. The show ring should afford a contest of that kind, and in addition to the practical lessons, and its educational value, it would partially remedy the tendency to rate breeding stock according to the flesh carried. While heavy flesh is necessarily a factor of great importance, yet to go into a breeding herd and absolutely rate every animal as if it were to go at once to the shambles, may lead to entirely erroneous results. I do not undervalue fitting; other things being equal, the best fitted should always win, but the point that I want to urge is that an animal in a breeding herd ought to be rated according to its value as a representative of that herd, and for the purpose of the herd, instead of taking rank simply as a carcass of beef in the form presented. In a fat stock ring it is proper that only the carcass be considered. In a breeding ring, an animal should be rated by its value to go on in the herd, and not simply to go onto the block. There is a well marked distinction here that should never be overlooked. The fat stock classes should be added for the lessons that they will bring, and to avoid diverting the purpose of the breeding stock classes. A sum of money equal to that given to any one breed would be sufficient to make a satisfactory classification in which fat stock of all beef breeds could compete and furnish one of the most interesting and instructive features of the fair.

In conclusion I wish to call attention to one other point, by way of emphasis, of the necessity of having the right kind of cattle to insure a profit, or rather to avoid a loss, under present conditions. There is not a very great difference in the rate of gain, or the number of pounds of increase in weight from a given amount of feed, that will be made by a representative of the best beef breeds and a genuine scrub, a Jersey or a Holstein steer. This is a fact that practical breeders and improvers of live stock were slow to accept at first. In fact they did not accept it until it was

repeatedly demonstrated, and some will not concede it yet, but the evidence is constantly accumulating and it is useless to ignore facts. After all there is no well founded reason why a Shorthorn or a Hereford or an Angus should make more gain in weight from a bushel of corn than a Holstein, a native, or a scrub. This is governed altogether by the digestive and assimilative machinery of the steer. The Holsteins, for instance, are known to be vigorous eaters, and the despised scrub usually has a digestive system like a goat—and is always hungry. Scientists have discovered that civilized man has no greater powers of digestion than the barbarian or the Indian. Neither has the improved steer better digestion than the native. The feeder is often deceived in the belief that he has a good bunch of cattle simply because they feed well and gain rapidly. Economy of production is an important factor but it is by no means all. It is even more important to have a finished product that the market wants and will pay for, than that it simply be produced cheaply.



HIGH GRADE JERSEY STEER.

Fed and marketed by the Iowa Experiment Station.

Here, for instance (pages 81-86), are illustrations of two steers fed at the Iowa experiment station; one is a Jersey and the other a Hereford. While they were in the feed lot, the Jersey made a gain of two pounds a day for nine months; and the Hereford 2.03 pounds for fourteen months. There was practically no difference in the rate and cost of gain. Judged by the record they made up to the time they went to market, the Jersey would take rank close to the Hereford in both rate and economy of gain. But the interesting part of the comparison came later. The Jersey took on flesh rapidly and was exceedingly fat and well finished. He was as good as it is

possible to make a Jersey steer. Yet when he went to market he had to sell \$2.12; below the top quotations, while the Hereford went 10 cents above the top for any other cattle on the market. But you may say that this was partly prejudice. I used to think so, but since I have followed cattle through the feed lot and to market and onto the block, and carefully ascertaining all the facts for several years, I have changed my mind. I will show you where the difference was in those two steers. This steer (the Jersey) belongs to a breed that has been developed for centuries for the specific purpose of making butter—that is, putting the product of its feed into the milk pail. They are rough, angular and bony, and when you fatten them, as you can do, they do not put the fat into the tissues of the high priced cuts of steaks and roasts on their back, but this steer had 190 pounds of what is termed loose or internal tallow, and fifty-five pounds of suet on a 783-pound carcass; that is, 32.1 per cent of that steer's carcass was tallow. Tallow was at that time worth 4 cents a pound, while the best loin cuts were worth 19 cents, at wholesale. And besides that, this steer only dressed 57.5 per cent of beef, while the Hereford dressed 67.5 per cent. Then the Hereford only had ninety-five pounds of tallow and thirty-eight pounds of suet on an 888-pound carcass—equivalent to 15 per cent. And besides this striking difference in percentage of meat in high priced cuts, the meat of the Jersey was very much inferior to that of the Hereford. The Jersey steer went on accumulating fat around his paunch and internal organs to the extent of nearly one-third of his body weight, while he hadn't meat enough on his back to decently cover his bones. This explains why you can never get a Jersey or a Holstein or any other roughly made steer smooth, no matter how long you fatten them. There is a reason why rough cattle do not sell. These same distinctions are largely true of the native and all other improved cattle, when an attempt is made to fatten them for beef. The men who buy them don't need to kill them to find it; they know it as soon as they see them.

So when we put a steer into the feed lot to fatten, it is all right to know that he is gaining rapidly and cheaply, but we also want to know whether he is making a 4-cent product or a 19-cent product. If he hasn't the beef type, and hasn't the characteristics of a beef animal bred into him, he will fall short of the mark. Feed alone does not make the high selling product.

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APPENDIX.

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SEVENTEENTH ANNUAL MEETING

OF THE

Iowa Shorthorn Breeders' Association,

HELD AT

WEST LIBERTY, MUSCATINE COUNTY, IOWA,  
DECEMBER 7 AND 8, 1897.

OFFICERS FOR 1897.

PRESIDENT.

W. W. VAUGHN ..... Marlon

VICE-PRESIDENTS.

J. R. CRAWFORD ..... Newton  
J. P. MANATREY ..... Fairfield  
J. A. EVANS ..... West Liberty

SECRETARY AND TREASURER.

C. W. NORTON ..... Wilton Junction

DIRECTORS.

C. S. BARCLAY ..... West Liberty  
R. J. JOHNSTON ..... Humboldt  
A. DAVIDSON ..... Monticello

*Committee on Resolutions*—I. R. Johnson, A. Davidson, B. L. Norton.

*Committee on Officers*.—J. N. Dunn, J. P. Manstrey, George Burge.

*Committee on Place of Meeting*.—J. W. Slemons, J. R. Crawford.

## PROGRAM.

TUESDAY, DECEMBER 7TH—7 P. M.

Prayer by Rev. Birch.

Welcome, by C. S. Barclay, West Liberty.

Response, by Dan Sheehan, Minnesota. (?)

Annual Address of President Parsons.

Appointment of Committees.

"Shorthorns and their Future"—Bruce Young, Mt. Pleasant; B. L. Norton, Wilton; discussion.

"Shorthorns for the Western Range"—George Harrah, Newton; followed by discussion.

"Economy in Feed, and Care"—Prof. C. F. Curtiss, Ames; discussion.

WEDNESDAY, 9 A. M.

"Breeding to Obtain Best Results"—H. D. Parsons, Newton; discussion.

"The Show Ring—How to Feed to Win, and not Destroy the Usefulness of the Animals as Breeders"—Ralph Barclay, West Liberty; discussion.

"Has the Shorthorn been Improved in the past Twenty Years?"—J. R. Crawford & Sons; discussion.

"How Shall we Provide Water for our Stock?"—"Wallaces' Farmer" and "Iowa Homestead;" discussion.

The following gentlemen have kindly consented to write papers:

Alvin Saunders of the "Breeder's Gazette."

C. L. Gerlaugh, Osborn, Ohio; "Shorthorn Calf and Care to Maturity."

John C. Baker, Manhattan, Ill.; "Polled Cattle."

Wallace Estill, "Conformation"

I. M. Forbes, Henry, Ill., A. Barber, Avon, N. Y.; "Shorthorns."

Reports of Committees.

## IOWA SHORTHORN BREEDERS' ASSOCIATION.

The seventeenth annual convention of the Iowa Shorthorn Breeders' association convened at the opera house in West Liberty, Tuesday evening, December 7, 1897, at 7 o'clock.

The association was called to order by W. W. Vaughn, of Marion, who addressed the meeting as follows:

Owing to the absence of the president and two vice-presidents I am compelled to take the chair this evening. I think this is unfortunate for the association and unfortunate for me, but I will endeavor to discharge the duties of the office to the best of my ability. The first thing on the program will be prayer by Rev. Birch.

CHAIR: We will now listen to the address of welcome by C. S. Barclay.

*Gentlemen of the Shorthorn Breeders' Association:*

I think this is a very unfortunate selection by our secretary. I have been so very busy for the past week or ten days that I have had no time to think of anything to say to this association. I jotted down a few things this morning, having a few minutes to spare, and have had no time to look them over until I came to the hall.

ADDRESS OF WELCOME.

BY C. S. BARCLAY.

The welcome you will receive will be expressed in acts and not in words. I hardly know what to say unless I would borrow the words of a gentleman of one of the towns of the south, to a like association where people are noted for their hospitality. He says, come in, sit down and be seated; so I say to the Shorthorn breeders of Iowa and other states that have favored us with their presence. Our citizens, both of city and country, have looked forward to your coming with pleasure and the determination that as far as they are individually concerned your stay with us shall be made as pleasant as it is possible to make it. The city of West Liberty is noted not for her Sultans, but for the intelligence, sobriety and energy of her people and to the great live stock breeding interests of the country surrounding her, in



the future of which we as breeders of the state are particularly interested. It has been as many as forty years ago since the first Shorthorn cattle were brought here from Kentucky. I well recollect an uncle coming to my father and wanting him to take an interest in the purchase of a bull that a man by the name of Bradly had brought here along with others, and some of these cattle were sold about here. From that time until the present, West Liberty has been the home of the Shorthorn, and for the last twenty-five years has been one of the live centers of breeding. I believe I am strictly in the bounds of truth when I say that from no point in this country has there been more Shorthorn cattle sent out for breeding purposes, than from West Liberty. The organization to which we belong was considered and brought forth in the hall we now occupy on the 24th and 25th of January, 1882, and to show you something of the interest at that time we now read from the records of the first meeting.

It gives me unbounded pleasure to welcome you to our city and to our country. We feel that we have an interest in the breeding of Shorthorn cattle that is second to none, and I assure you that every one of you is heartily welcome to our midst, and further that we will do our utmost to make your stay here both pleasant and profitable. I thank you gentlemen.

C. W. NORTON: Mr. ERION has consented to respond to the address of welcome, and we will now listen to him.

J. M. ERION: *Gentlemen*—I hate to accuse the honorable gentleman of making a mistake, but I did not consent to do this work. He is one of those men who never take "no" and he has absolutely forced me into this. I never in my life made an impromptu speech. To make a good impromptu speech I want three weeks' notice, and then I will write it down. In regard to responding to that address of welcome, I feel out of place. I am not a member of this association and this is my first meeting with you. I have often wanted to meet with you but I never had the opportunity before. I came here to learn what I could in relation to the Shorthorn business. You are strangers to me and I am a stranger to you. I have only entered into the Shorthorn business very lately. I think I can properly voice the sentiments of this association when I say that we are glad to meet with the breeders and citizens of West Liberty. I have met with you before and I have found a civil and hospitable class of people down here. I trust you will keep up with your standard of excellence this time. Mr. Barclay says West Liberty is not noted for her saloons. We do not want to be classed with the style of men that visit these places, but we would be glad to visit any other place of entertainment. I came down to West Liberty with the intention of staying until the last dog was hung. I am going to make myself at home and I think every other member of this association expects to do the same. We came out for a good time and we expect to have it. I have nothing more to say.

C. W. NORTON: I hold in my hand a letter from our president, H. D. Parsons, of Newton, regretting that he can not be present. Mr. Crawford will now read it.

The following paper was then read by Mr. Crawford.

PRESIDENT'S ADDRESS.

BY H. D. PARSONS.

*Gentlemen of the Shorthorn Breeders' Association:*

This is the first time that I have had the opportunity of thanking you for electing me as your president at the last annual meeting at Fairfield when I was not present. I appreciate all of this very much. No man takes any greater interest in the breeding of Shorthorns than I, and I esteem it quite an honor, fellow breeders, to be associated with you. In rehearsing the last year's business with our cattle my mind is naturally carried years back. I well remember attending the administrator's sale of the late Robert Miller. At that time our friend and fellow breeder, Colonel Judy, spoke to some extent on the future of Shorthorns. Thought there never was a better time to invest. You have all heard that matter discussed all along the line until a number of our breeders have become discouraged and have gone out of the business. I well remember when attending our Shorthorn breeders' meeting at Ames in 1894, our president, R. J. Johnston, in rehearsing the business for the year, said, "To the Shorthorn breeder that will hold out there is a better day coming." A number of us have kept breeding, but, as the poet sings, had become almost failures we were almost persuaded they never come until the year 1897, which may well be termed one of the most prosperous years of Shorthorn breeding.

Our Shorthorns to-day are fully 40 per cent higher than they were one year ago. This advance has enabled us to unload our surplus product at fair prices.

No good reason why the Shorthorn breeders of Iowa should not be encouraged. We, as breeders, have been looking forward to the time when our cattle would meet with a ready sale at *paying* prices, and now that time has come. I think there is no question, but that the man who has good Shorthorns, pedigree and individuality combined, has a paying business for a time at least. There is probably no breed of cattle more admired or widely known in the world than the Shorthorns.

It would seem to me that the breeders of Shorthorns in Iowa have not made the exhibit at our fairs, the state fair, more particularly, that they should.

We have cattle in Iowa that will compete with any breed known, if properly fitted; we must wake up.

It has been advocated by some of our best cattle men that we could not raise what we call an all purpose cow, and I, myself, have doubted whether or not we could obtain the best results along both lines, but, with the milk

and beef records that our Shorthorns have, we must conclude that with the grass and corn our Iowa soil produces, the Shorthorns are the best money-making breed of cattle now known.

A few years ago if we wanted to buy a good bull or cow, we thought they must be raised on the other side of the water, but there is no question but we now have as good Shorthorns in Iowa as there are in the world.

In conclusion, let me again thank you, fellow breeders, for the honor you have shown me in years gone by.

CHAIR: The next thing on the program will be a paper by Bruce Young of Mt. Pleasant.

Mr. Young not being present, Mr. W. P. Young addressed the association as follows:

I have no intention of representing my son. I am not prepared to make a speech. I will say a few things, though, on the Shorthorn question. I believe I was here when the association was organized and I have been in the business ever since. I am nearer out now than I have ever been before. We know nothing of the Shorthorn business of the future. We know what it has been in the past. The Shorthorn business of the future is what the breeders make it. We have the best breed of cattle in the west, I think. We have a breed of cattle that can not be equaled anywhere. We have a breed of cattle that will produce both beef and milk. We must develop these qualities. If we want milk, the milk qualities must be developed. If we want beef the beef qualities must be developed. We can not make milk cows by letting the calves run with the cows. That has been my experience for twenty years. If we want to raise milkers we must take the calves away from the cows and let the milk qualities develop. The Shorthorn is a good all purpose cow because we can make beef and milk of the same animal, and do it successfully. There is no animal that will make better beef than the Shorthorn if properly fed. There have been more Shorthorns raised in America than any other breed, and this will continue to be true if they are properly bred. I think, in a great measure, our Shorthorn business has been injured by running to pedigree. You remember fifteen years ago there was a great rage over Bates cattle. Every breeder wanted a Bates bull and a Bates pedigree, and that injured our quality in a great measure. I think every old breeder will admit this. I find the cross of Crulckshank on the Bates a good one. It is a great improvement on the beef qualities. The Bates has a finish that the Crulckshank does not have. In joining the two it will make a better feeder and neater animal, and it will give us a better class of cattle. I think there is no better way of improving our Shorthorns than by crossing the different families together. By uniting two families we have a better class of cattle.

CHAIR: We will now have a paper by B. L. Norton, of Wilton.

B. L. NORTON: I feel out of place to come up and read a paper before these old breeders. I feel like I ought to be like Mr. Young's boy, at home on the farm.

## THE PAST AND FUTURE OF SHORTHORNS.

BY B. L. NORTON, WILTON JUNCTION, IOWA.

### *Mr. President and Gentlemen of the Association:*

In all meetings that I am connected with, they initiate their members before they put them to work on the program, but as Shorthorn men claim to be different from other people, we will submit if you will bear with me.

This subject might go back to the earliest breeders of Shorthorns, the Colling Bros. and trace them through these years.

Many of you gray-haired breeders, who have lived these years, can better review the past, then my few years' acquaintance with Shorthorns, yet I can't remember when father was without Shorthorns. It is true they have been on the balance and at times the balance swung down. Some, possibly, were compelled to quit the business.

But if you are looking you may see a light of hope peeping through.

That time I think is here with stock cattle selling from \$4 to \$4.50 per cwt., and fat cattle close to \$6 per cwt. The prospects ought to encourage us.

Again many have sought to supply the shortage in cattle, and they are looking for some good blood, and we Shorthorn men claim that nothing is superior to the Shorthorn.

Amos Crulckshank claims the Shorthorn to be the rent paying cattle. Gentlemen, there is no question in my mind, but that the Shorthorn cattle are the best breed in the world. We will admit that there are other breeds, but for a general purpose cow the Shorthorn ranks first. It is true that other breeds are trying to be classed as general purpose cattle.

Take the Herefords—they are good beef cattle, but their calves are a little slow in starting for they are compelled to be slow on milk. We look to a cow for three things, the milk, the value of offspring, and the value of the cow for beef. The farmer looks at these three points. First, the milk, which the farmer expects to pay for his groceries. He must not expect the thick Jersey cream that possibly some of his neighbors brag about. But you may expect more milk, and can equal his butter in flavor and at the same time be raising a good calf that is worth at least \$20 at six months old, or if a full blood, five times that amount. Again, when this cow has passed her usefulness she may be put on the market at a good price. If we had taken the Jersey for our general purpose breed, as some advocate, where would we land?

Let us see?

First, the Jersey would likely equal, if not lead, the Shorthorn in the amount of butter produced.

Second, we would expect one-half of the calves male and they are generally admitted as not worth raising (of course there are exceptions).

Third, a Jersey after she has failed to produce will not sell for a fair price.

So, really, in a nut shell, in the one you have milk or butter, and in the other a fair amount of milk and a good calf, that will make you plenty of money and a cow that will sell for a good price on the block.

The Shorthorns of to-day are of a low down, thick flesh build, and it is wise to watch the feeding of the heifers. Iowa, we all know, is one of the foremost states in the union in the production of corn and as we all produce it and it is cheap, being only worth \$8 per ton, consequently we are apt to feed too much fattening food, and then they will not be as sure breeders.

If the growing stock are fed more good oats and bran and less corn they would make better size, and would be less liable to become barren.

The idea of breeders feeding calves to maturity on the same feed as to fatten steers is ridiculous.

The red, white and roan are the original colors of the Shorthorn. The color craze is dying out, and people are learning that the color of the beast does not stand for the quality of the animal. Of course I would not advocate raising white cattle, but it seems to me that a lovely roan ought not to be objectionable. But, gentlemen of the association, above all color, let us breed to get a first-class individual, and then let it have as good a pedigree and color as your purse will allow.

CHAIR: You all have a part in this discussion. The remarks by Mr. Young and the paper by Mr. Norton have furnished us lots of good points. Let somebody open this discussion.

Call for Brown.

BROWN: I have nothing to say.

BARCLAY: I think Mr. Brown can say something that will do us good. Mr. Brown has about fifty very choice thoroughbred cows. He has as good a Cruickshank bull running with these cows as I ever saw. I wanted to purchase a few bulls and he said I cannot afford to sell these. Mr. Brown has been very successful in the business. Thirty-five years ago I recollect he was raising Shorthorns when I was buying some cattle.

BROWN: I have been in the Shorthorn business for a number of years and have had some experience, but I did not make such a great success of the business. My main business has been feeding steers. When I was not making much money on Shorthorn cattle, the steers helped me out.

JNO. MYERS: I want to talk a little on the subject of feed. I think too much corn is fed and not enough grass. Corn is expensive, and when you are feeding corn you have to pay for

a great deal of labor; labor is expensive. Give them more oats and grass and less corn and you will make more beef for less money.

BROOKS, of Montana: I do not know as an outsider has a right to address this association. I have not much to say. I am very much interested in this subject. In the western country we are in the habit of roughing our cattle in the winter. Less than three weeks ago I took 400 head of steers up on top of a high mountain where they could get no water for the next three months. There was good grass there and good shelter, but no water. They will come down looking better than when they went up. I had only a ranch to keep them on below. We are paying too much attention to quantity and not enough to quality. Blood is not all of it but it is the biggest half of it. It costs no more to raise a thoroughbred than a grade and there is 40 per cent increased profit on the pedigreed animal. Now, I do not see why a farmer should raise grades when he can raise thoroughbreds and get the profit. I have raised a good many different breeds of cattle and am now raising Shorthorns. A few years ago the whole western country was one vast range and all the cattle were turned on it. Now we raise hundreds instead of thousands, as we did then, and pay more attention to quality. I want to say to you, gentlemen, pin your faith to the Shorthorn cattle. When you get one that is not just right, make a steer out of it and send it to Chicago. When you get one that is all right and gives promise of something, send it to us in the west and we will make you a little money. The Shorthorn is the coming animal on the ranch. They are quicker matured.

W. C. EVANS: I would like to hear from Whitacre.

ALBERT WHITACRE: I do not think I have anything to say. I came here to listen. I would say that the way to make a good steer is to take it when a calf and never allow it to go hungry or dry.

WENTWORTH: We have a man in our town who feeds steer calves. He is making more money than anyone I know of. I do not suppose in the last three years he has had a thoroughbred animal among these calves. He takes the calves in the spring of the year and these calves have never been hungry. He feeds these calves and sells them the following fall and spring.

The next thing on the program is a paper by George Harrah, of Newton.

Mr. Harrah not being present the chair called for further discussion on the last paper.

DUNN: It seems to me that the Shorthorn business of the future is a question that ought to be of special interest to all. We are all anxious for immediate results. The Shorthorn business of the future is what we breeders make of it. We must select animals of quality that have good constitutions. If we want the cattle of the future to be better we must look to these things. We want to select animals with these qualifications. We have got to take care in raising them. They ought to have plenty of milk to start with and then we must keep them going. I do not believe the Shorthorn of the future should be crowded into "baby beef."

WEDNESDAY, DECEMBER 8, 1897, 9 A. M.

Meeting called to order by R. J. Johnston.

CHAIR: We will now listen to a paper by J. R. Crawford, of Newton.

Mr. Crawford then read as follows:

#### HAVE SHORTHORNS BEEN IMPROVED IN THE LAST TWENTY YEARS?

BY J. R. CRAWFORD.

We would answer this in the affirmative. We certainly think they have been improved. Perhaps not to so great an extent as we would have desired, or the improvement as marked as it might have been. While there may not have been bred and raised many, if any, to excel or even equal such noted sires as Champion of England, Pride of the Isles, Cup-bearer or Young Abbottsburn, still we feel assured there has been a decided improvement all along the line, that is, among the rank and file of the Shorthorn family. Now, as we have intimated above, we think the improvement has not been as great as it might have been.

The question then comes up, and may well be asked right here, why not?

One answer to the question is, that within the last twenty years, yes, within the last ten years, the demand for Shorthorns, and especially for males, has been so great that everything was saved and raised and used for breeding purposes that had tail and horns, regardless, almost, of what lay between this tail and horns. Some have acted as though they thought any animal that could wag on the switch end of its fly brush the word thoroughbred, or could sport on its head or horns a pedigree, was good enough for

them. Now, from using such breeding stock, a great many nondescript animals have been raised and with which the country was flooded, thereby, to a great extent, checking the onward progress of the greatest of all breeds of cattle. To whom, then, do we attribute the fault or blame of this?

Why, we say unhesitatingly, upon the breeders of the past. We were all too eager and anxious to increase our herds in numbers, and many certainly succeeded in this to the sacrifice of quality and value. Whence, then, lay the remedy of this evil?

Why, in the prompt use of the knife on the males, thence to the feed yard and the block; we verily believe a great many good steers have been spoiled by sparing the use of the knife. But this loss of the steer was but a tithe of the loss and mischief done. These inferior animals transmitted to their offspring their defects in a marked degree, and thus went on the evil work as far as the males were concerned.

And, again, many of the females instead of (to use a rather vulgar expression) going to the bull had much better gone to the feed lot, thence to the block. Thus from these two evil sources combined come many of our poor cattle, thus very seriously retarding the upward progress of our herds.

But the old adage, that it is a long lane that has no turn, seems to have been verified in this case. We went on breeding and raising in this reckless way until, thanks to the hard times and depreciation of values of the past few years, we were compelled to call a halt, and wonder where we were at, in the cattle business. Now, whilst we were mourning and mourning over the hard times and low prices, and wondering where the end would be; and as we are now seemingly emerging out into the light, it would seem to us as that the few years of depression in business and thus checking to a great extent this reckless breeding of scrub thoroughbreds, that these hard times have been a blessing in disguise from the hand of our Heavenly Father. But, notwithstanding all this mistake and folly among the masses in breeding we are very thankful that some have kept their eyes steadily on the goal, and there has been a decided improvement in Shorthorn breeding.

Now, in conclusion we would say, that it behooves us to look well and earnestly to the work before us as we have very strong rivals in the field, especially strong ones in the daddies and whitefaces whose breeders are ever on the alert and are now wrenching from our grasp many of the best trophies offered, and many more of the laurels may be stripped from the brows of the red, white and roans whilst we are napping at our posts.

CHAIR: The next will be a discussion of this paper.

C. W. NORTON: I have in my mind the first Shorthorn bull I ever saw on my father's farm in Ohio. It was a great big white fellow. His hips were three feet broad. Thirty-eight years ago I first saw Shorthorns at New York. They belonged to the herd of J. O. Sheldon of Geneva. They sold as high as \$1,000 and I thought it wonderful. I never thought I would become a breeder and pay that price for a single animal. Since that they have sold as high as \$40,000. We do not pay

as much attention to size now as we did. In England they feed more oil cake. They give each calf all the oil cake it wants and then all the milk he can drink afterwards. I want to speak about color. It does not make much difference now, but we prefer red, as a general thing. Three-fourths of the prizes at the state fairs of 1897 fell to the roans, which is the case in England and Scotland, and always has been.

J. M. ERION: I want to ask Mr. Norton if he believes that the calves he speaks of could have been taken and handled in any way to make them equal to the calves of to-day?

C. W. NORTON: They were a different type of cattle from what we have to-day. The English type has not been changed; the type we have is the Scotch type. They are more compact. Feed has a great deal to do with the type in Scotland. The winters are longer and the food they use is different. No corn, grain and meal is high. The class of cattle they raise mature early. They put them on the market at eighteen months old. It takes a long time to change that type.

J. M. ERION: That class of cattle is the result of environment. They are fed on a different class of produce and the result is different.

YOUNG: Has our Shorthorn stock been improving? I do not know whether they have been or not. They only fill the demand of the market. Forty years ago the demand was for large cattle. To-day the market has changed. The demand has changed. They are a different class of cattle. We have to pander to the demand. Twenty years ago we wanted a big Poland China pig weighing 1,000 pounds. We can not sell that kind now. We want a little black hog now. It is the same way with cattle. We have to raise stock to suit the demands of the market. We have got to the bottom of the Shorthorn business. Twenty years ago the pedigree craze took possession of us and anything that had a Bates pedigree was sold. I have seen bulls sell for from \$500 to \$1,000 with very little merit in them. It was the pedigree craze. We have seen the results. Now we have got down on a solid basis and we are getting good animals. The market now demands an animal that is small, solid and with a good deal of beef to the bone. We get the biggest price for that kind of an animal. That is the kind we want. There is an improvement in that kind in the last ten years.

WENTWORTH: Twenty-five years ago I remember going to Boston to see a pair of Shorthorns, then called Durhams. Their weight was about 5,000 pounds, I think. They bore a placard on each side. They never had any milk, but were brought up on hay tea. They had all the tea they wanted. They were five years old at this time. I have seen dairy calves fed on this. I do not know the expense of feeding this. In the east they feed this and sell their milk and make money by so doing.

BAKER: Hay tea is an excellent thing for young calves. There is a good deal of sugar in it and it makes flesh.

CHAIR: I see that Mr. Harrah is here to-day and we will now listen to his paper.

HARRAH: I did not prepare a paper for this. There are other men here who can talk better. I have nothing to say. I do not know much about the western range business. I have only made two or three trips out there. They are using a better class of bulls than the average farmer.

C. W. NORTON: Do you think the average Iowa farmer can raise bulls and sell them to be shipped west, and justify himself at the price he gets?

HARRAH: They are paying more money than the average farmer can get.

NORTON: What kind do they want?

HARRAH: They want red bulls and bulls that mature early. They do not want pampered cattle.

NORTON: What is their choice of breed? Shorthorn?

HARRAH: They want every kind. They claim that the Herefords are better rustlers than the Shorthorns. There is a great demand for Shorthorns. More than for any other kind. They average about ten Shorthorns to one Hereford.

WENTWORTH: About what aged bull is the average?

HARRAH: Two years old.

WENTWORTH: What price is paid?

HARRAH: As high as \$100 a head. As low as \$40 a head.

WENTWORTH: What does the average farmer pay for a bull to put at the head of his herd?

HARRAH: The average price is about \$65.

PROFESSOR CURTISS: We have on the college farm a carload of range calves. There are sixteen Shorthorns, sixteen Herefords and sixteen ————. They were shipped from Texas. They are the best bunch of calves I have seen in Iowa

this fall. I have reason to believe a good many are sired by better bulls than the calves of Iowa. They are good blocky fellows. They were taken from the cows and brought here and I believe the beef is as good as any in the Chicago markets. I think these calves were sold at from \$20 to \$25 per head. I believe the cattle and sheep business will be more largely done in that way. The people there can raise them cheaper than we can, but we have the grain to finish them. The breeding business will be done in the range country and the fattening here. They were a little wild at first, but they are quieting down and by the time we have had them a few months they will be all right. The man that sent these calves sent 500 head. He charges us no commission and furnishes them at \$20 a head. He sent 500 to Illinois and Missouri and here.

WENTWORTH: Are they using better bulls than the breeders here in Iowa?

CURTISS: They are using no better sires than the progressive breeders here. Lately some of the range men have paid \$800 to get a good bull. They appreciate good blood and use it. In feeding sheep, we have the same thing. The sheep are not making the improvement the cattle are:

JOHNSTON: What do you pay for these range lambs?

CURTISS: We paid four cents a pound last year. We bought them in New Mexico. They cost us \$4.25. We sold them for \$5.25 at Chicago last spring.

CHAIR: The next thing on the program will be a paper by Prof. C. F. Curtiss of Ames.

Professor Curtiss read the following paper:

#### ECONOMY OF FEED AND CARE.

BY PROFESSOR CURTISS.

Economy of feed and care involves the best results from the least expenditure. Economy means more than a restricted or meager allowance. A liberal policy or even lavish bestowal of feed and care on good Shorthorns results in better economy than stinting. Economy is an essential factor but it must never be sought at the expense of excellence. Our domestic animals are largely the result of feed and care, and to withhold these means impairs production. Too many breeders appear to be governed by the misleading doctrine that superior ancestry will compensate for all ills of feeding and mismanagement. Pride of ancestry is well enough, but it is of little consequence without individual merit. The son of an English nobleman was

recently somewhat offended by a custom officer when he landed on American soil and with characteristic dignity he informed the officer of the blood of royalty coursing through his veins and the honorable title he bore. "Oh, never mind that," said the officer, "that won't hurt you any in this country." It is much the same with Shorthorns, although pedigree does have rather more significance in cattle than in men; but notwithstanding that the crucial test is the test of practical utility, and failure in this means failure in everything.

No inflexible rules can be established for economy of feed and care. What is economical for one locality, or even one farm, may be altogether unsuited to another; and a system of affording economical management on the same farm one season may not be wholly applicable during another of changed conditions. The prime essentials in considering economical feed and care are the best attainable results with the lowest outlay for feed and labor involved. In the first requisite, the standard should be a high one closely adhered to, and following that careful attention should be directed to minimizing the other factors. Economy of feed should begin with a study of the needs of the animal, whether the purpose be to produce growth, fat or milk, and the adaptation of the ration to suit the requirements. To furnish a fattening ration for the production of milk or growth will not only result in poor economy but tend to produce disastrous results as well.

The market value or cost of feeds must also enter largely into the calculation of all rations. It should not escape the feeder's attention that the grass and corn crops afford the most economical and, all things considered, the best feeds that the farm affords. The problem of economical feed and management largely resolves itself into utilizing these crops in the most practical and satisfactory manner. The possibilities of Iowa's fertile soil in grass and corn production have not been over half attained. No crop grown on the farm is of greater importance, or receives less attention, than the grass crop. The loss from this source alone would soon be sufficient to stock the farms of Iowa with improved stock. The chief source of this loss lies in the neglect of the grass plant, and overstocking pastures. It is a law of nature that when cultivated plants through any cause fail to take possession of the soil, weeds come in as a substitute. This results in injury both to the quality of the feed and the condition of the soil. It is absolutely essential to the best results to secure and maintain a good stand of grass and then practice the doctrine of that eminently practical and successful member of the association who says that "The way to get grass is to let it grow." The average grazing season of Iowa might be lengthened at least one-fourth, and in many cases one-third, or even doubled. After having traveled considerably in several of the leading grazing states, including the famous blue grass district of Kentucky, I have no hesitancy in saying that I am firmly of the opinion that Iowa has to-day more blue grass than any other state in the union. It is both economy and good management to make the best utility of this—a product that contributes vastly more to the nation's wealth and resources than all the Klondikes and other gold mines known to the civilized world.

We can not always afford to allow as large a feeding percentage of our corn to go to waste as annually takes place. This great American cereal has never been fully appreciated even by our own people, and much less by

the feeders of other lands. And while "corn is king," and grass its strongest ally, it must not be regarded that these are by any means the ne plus ultra, or the be all and end all, of the feeder's store room. A few years since when that veteran English investigator, Sir Henry Gilbert, visited America he said while riding over our fertile farming lands, "One feature of American agriculture is distinctly lacking. Where are your roots?" The reply was "No American farmer will bend his back to hoe roots." The latter statement was true only in a general way, for the American farmer is coming to appreciate the value of succulent food during the long months of severe winter. The root crops and ensilage are destined to occupy a higher place in American agriculture. We will in the near future, I believe, grow sufficient beets to make our own sugar, and that industry will also greatly stimulate root culture for stock feeding.

Then, too, our farms usually afford a surplus of carbohydrate and starchy feeds and a deficiency of protein and bone and flesh forming substances. This is particularly true with reference to the needs of the young growing animals and dairy stock. It is always economy to supply these essential needs of the animal in some way. If this can be done from the products of the farm, so much the better, but the necessity should by no means be ignored. Clover hay, oats and barley, should be made to supply this deficiency as far as possible, and in addition the by-products of the mills serve a good purpose. Bran and oil meal are most extensively used in this connection, and give good results. They are not always the most economical, however. At present we are making use on the college farm of a by-product from a starch factory called gluten meal, as a substitute for bran and oil meal, and a means of supplying a suitable flesh producing and dairy ration with corn as a basis. This product is the refuse of corn after the starch has been taken out, and the protein fat and mineral matter remain. A pound of this feed with the starch removed has a higher feeding value than the original corn in the natural condition. Below is given the pounds of digestible nutrients in 100 pounds each of corn meal, gluten meal, bran and oil meal, and also the present price per hundred pounds of each of these feeds:

DIGESTIBLE NUTRIENTS.

	Protein.	Carbohydrates.	Fat.	Nutritive ratio.	Total digestible nutrients.	Present price per cent.
Corn meal.....	8.3	81.4	3	1:11	71.1	\$ .43
Gluten meal.....	35	49.4	8.8	1: 2.5	80	.50
Bran.....	15.6	44.1	3.9	1: 4	59.6	.45
Oil meal.....	32.3	33	7.1	1: 1.7	67.6	.45

It will be seen that 43 cents buys 71.1 pounds of digestible nutrients in the shape of corn meal, and 50 cents buys 80 pounds when expended for gluten meal, while 45 cents buys only 59.6 pounds in bran and 95 cents only 67.6 pounds in oil meal. On this basis the corn and gluten meal are much the cheaper feeds. The gluten meal is well adapted to supplying the nutrients that corn is deficient in with the exception of mineral matter. Both are deficient in that.

The college dairy herd is now being fed six to eight pounds daily of a grain mixture consisting of equal parts of ground oats, barley, bran, and gluten meal, five to eight pounds of cut, snapped corn, four pounds of sheaf oats, and five to six pounds of timothy and clover hay. We have about thirty cows in milk, and the receipts average \$150 to \$180 per month the year round. Some cows in the herd are yielding more than twice as much as others.

The labor item should be reduced as much as practicable. We would undoubtedly get better results from the feed consumed if we were to use ground instead of snapped corn, but practically it would not pay. The droppings are picked over by hogs, and the advantage of grinding would not cover the expense. In feeding the sheaf oats economy is also effected, as in the first place the threshing bill is saved, and that, at the prices prevailing for oats lately, amounts to from 15 to 25 per cent of the value of the grain. Then by cutting the oats a little early, while the straw is partly green, the entire product is eaten with a keen relish and from one-fourth to one-half of the hay ration is saved. The herd is not yet being fed up to its full capacity. The allowance of sheaf oats will be increased somewhat during the winter, the roots will be increased to ten pounds, and shredded corn stover will be largely substituted for the hay. Some of the cows will also receive a heavier grain ration. We find it necessary at times to withhold all corn from cows that have too great a tendency to fatten, and feed more largely of bran and oats. Other cows will milk comparatively well on any ration. Economy requires close attention to all these individual variations, as well as the general results. Our dry cows are wintered mainly on corn fodder fed in an open yard; and at present prices of labor and feed there is no more satisfactory way of wintering stock cattle than by making the best and most practicable use of blue grass pasture—and that means the year round—and feeding liberally on well preserved corn fodder. It is impossible within the space of a brief address to fully discuss the subject of economy in feed and care. This subject must of necessity be a continual study. It is constantly presenting new phases that call for new methods, and success in the live stock field will depend largely upon the ingenuity, intelligence, foresight, and business ability brought to bear on these ever-varying problems.

PROFESSOR CURTISS: We feed corn and run it through a threshing machine. We are asking the legislature for \$500 to build a silo. We hope to put up one and make use of it in that way. We do not use one now. We use roots and feed them to all the stock on the farm. We use sugar beets and mangels and carrots. We give the cows a bundle of sheaf oats a day. They eat it all. We have a variety of oats that is good. It is called Early Champion oats. It does not grow large. It yields as well on an average as any kind we have used. We prefer mangels to sugar beets for stock purposes. The mangel grows larger. The beet is hard to clean and is more expensive to handle. There is a great deal of acid in silage. Stock relish

acidity in their food. Silage are a relish to animals as pickles are a relish to our diet. Roots are cheap and with corn fodder they make as good results as silo.

QUERY: Do you use rape?

CURTISS: Rape is mostly water. It is a nice feed. It is well adapted for sheep, also for hogs. Turn hogs in a field of rape and it is an excellent thing for them.

Discussion closed.

WENTWORTH: I want to say a word to you. From June to November of next year will be the Omaha exposition. There will be liberal sums given in the various classes. The two states benefited will be Iowa and Nebraska. Nebraska has given \$100,000 to promote the interests of the farmers of Nebraska. Iowa has given \$10,000. If you would go there and take your stock you could prove to the world what you have, and add to the fine exhibit that will be made. It is estimated that 75 per cent of the people that go there will cross the state of Iowa by daylight and will see our herds and flocks. There is great possibilities in this. The state of Iowa should appropriate \$100,000, and this would mean to you a tax of 25 per cent on 160 acres of land. They do not ask for anything of that kind, but they want you to take an interest in the matter for state pride. There is a direct benefit in making a good display at this exposition. There is talk about doing away with the state fair this year on account of the exposition. It will not cost you any more to go to Omaha than to Des Moines, and the majority of the people will be there. The people of Iowa can hold their end up and make a creditable display. We have a great market in the west.

CHAIR: As we have some time yet we might take up the discussion of the paper assigned to Ralph Barclay, "The Show Ring—How to Feed to Win, and not Destroy, the Usefulness of the Animals as Breeders."

CURTISS: There is one point I want to speak about. It makes a difference how you put the flesh on an animal. There is a general opinion that a bull, particularly a breeding animal, must not be kept in high flesh. That it will destroy the potency of the animal. That theory has worked a great injury. I think if you keep an animal a mere skeleton, he will not transmit the fattening quality as well as if he carried flesh. I do not believe in keeping them down to preserve their usefulness. A breeding animal should be kept in a thrifty condition. Roots and

grass should be used and an animal carried to a high finish with safety. If care is exercised as to the method of putting on that flesh, there is little danger of injury. The standard of the show ring is set too high. There are things in an animal besides fat that should be looked at.

JOHNSTON: I am a crank on this subject. If you keep an animal in the same way you should never keep them too fat or too poor and they will be all right. I think that is so with every animal in this country. Keep them always just the same. I would prefer them to be too fat than too poor. I believe in exercise, all right.

CHAIR: The hour has now arrived for closing this discussion.

Paper by Jno. Baker:

MANHATTAN, WILL COUNTY, Ill., October 18, 1897.

Mr. Charles W. Norton:

DEAR SIR—I had the pleasure of meeting you at our state fair and think I almost promised to write you a short paper on Polled Durhams to read at your meeting of Shorthorn Breeders. Although the Polled Angus carried off the prize at Springfield, I don't think, yet, that they are as good cattle as the Shorthorns. I have bred Shorthorns for thirty years without seeing any cattle that, in my opinion, are their equal. We have always taken pride in their horns being short, and when they can be bred off and still retain the grand quality of the Durhams, I say, let them go. There may have been a time when I thought them ornamental. There certainly never was a time that I thought them useful, and doubts have gradually come into my mind as to their being ornamental.

It required quite a struggle with myself to start out in search of a "Polled Durham bull." Now, after raising in the past two years forty without horns, the beauty of hornless cattle is very clear to me. Now, any breeder must admit that horns are an utterly useless appendage on domestic cattle.

The only question to be discussed is, are they ornamental, and can we get bulls, that are hornless, of sufficient quality to gradually breed the horns off our Durham cattle?

As to the first question, are they ornamental?

Let any breeder go among his aged cattle and settle it with his own conscience. See how many of his cows have a pair of horns, and make a mental note of how few there are but what have something wrong with one or both horns. It is impossible to find two cows with horns alike and almost so to find one cow with two horns alike; and so there is not that uniformity among the horned that there is among the hornless cattle. It would not be wise certainly for a breeder to lower the grade of his stock to get rid of horns, but there are good "Polled Durhams" and there are good horned Durhams, and there are poor ones in both kinds. Whichever kind are bred, horned or polled, let us use our best judgment in selecting good individuals, and not be too much swayed by high sounding pedigrees—neither can we do with-



out the pedigrees. But do not let us be like a man I know who had plenty of money and wanted a herd of Jerseys, and sent his man out with orders to "buy the best pedigrees in the country." He did so. They came high but are not much to look at. But to a breeder of Durhams, Jerseys never are.

Fortunately we have not all the same taste, and some will always stick to the Shorthorns, with horns, and it would be a pity if it were otherwise—for they have done more good for the American farmer than all other cattle breeds combined. Nevertheless, I am going to breed their horns off in my herd, trying to hold fast to what is good.

NEWTON, Iowa, December 4, 1897.

C. W. Norton, Wilton Junction, Iowa:

FRIEND NORTON—I had made all arrangements to attend our meeting at West Liberty, but the snowstorm yesterday, along with other urgent business affairs, will prevent me from attending. Very sorry, indeed, that I cannot be with you, especially so because I failed to attend the last meeting at Fairfield, and then you again gave me the honor of the presidency for 1897. All this I appreciate very much. But there is, at times, things that are beyond our control and such happens to be my lot at present.

Enclosed you will find one dollar (\$1), to pay membership fee.

Hoping that you may have a good meeting I am,

Very sincerely yours,

H. D. PARSONS.

CHICAGO, Ill., October 23, 1897.

Mr. C. W. Norton, Durant, Iowa:

DEAR MR. NORTON—Referring again to the matter of a paper before the Shorthorn Breeders' association, I must write to beg to be excused. The shows to be held here this month and in New York, and the active preparation of the Christmas Gazette to be brought out December 8th will occupy my time so closely that it is out of the question for me to tax myself further, much as I would like to accommodate you. I always enjoy talking to, and meeting with, breeders of Shorthorns and nothing would give me more pleasure than to meet with you and read an address. There is a limit, however, to what I can stand and during the next sixty days I will be "busier than a man killing snakes."

Respectfully yours,

ALVIN H. SANDERS.

WEST LIBERTY, Iowa, January 29, 1898.

C. W. Norton, Wilton, Iowa:

DEAR SIR—I enclose copy as made out for the association and my bill. Please look it over and return it as soon as possible. Mr. McFadden has promised to see Mr. Whitacre and get what he said and it will be put in when the copy is returned. I will number the papers I have here to agree with the manuscript I send you when the copy is sent back. Please send me the papers you promised to get from some other parties.

Very truly,

JESSIE HENDERSON.

WEST LIBERTY, Iowa, January 29, 1898.

Iowa Shorthorn Breeders' Association Dr., to Jessie Henderson, for stenographic report, \$5.

WEST LIBERTY, Iowa, October 19, 1897.

C. W. Norton, Wilton, Iowa:

DEAR SIR—I have written several gentlemen concerning papers for our Improved Stock Breeders' meeting. I hope to have replies from them in a day or two and if nothing prevents, Mr. Barclay and I expect to come down to Wilton Friday of this week, if it will be satisfactory to you, and make out the program at that time. Please let me know if this arrangement will be satisfactory to you, and if not indicate some time when it would suit you to have us come down.

Very truly,

W. M. MCFADDEN,  
Secretary.

WEST LIBERTY, Iowa, December 28, 1897.

C. W. Norton, Wilton, Iowa:

DEAR SIR—What about the copy for the Shorthorn Breeders' proceedings? We have gone over the stenographer's notes for the general meeting and have them in pretty good shape, I think. Miss Henderson desires some one to assist her in writing out her notes as the terms used and expressions are nearly all new to her, and a very much more satisfactory report can be had where some one who was present at the meeting assists in writing out the notes. I could have done this for the Shorthorn meeting if I had been present, but as I was not I can be of no assistance. It would take a good part of one day to write these notes out. Can you, or will you, come down and help? If you can, the report will be a very much better one than it would be if you did not come.

Very truly,

W. M. MCFADDEN.

#### NAMES OF MEMBERS.

John Meyers, Kalona.	Julius Brown, Solon.
John Evans, West Liberty.	J. P. Nichols, West Liberty.
W. P. Young, Mt. Pleasant.	W. W. Vaughn, Marion.
J. T. Kinmonth, Columbus Junction.	S. H. Thompson, Iowa City.
W. A. Bryan, New Sharon.	Geo. Dunkelberg, Rockford.
J. P. Manatrey, Fairfield.	Wm. McConnell, McCausland.
E. Davidson, Monticello.	Albert Whitacre, West Liberty.
P. B. Turkle, West Liberty.	J. R. Crawford & Son, Newton.
Jordan & Dunn, Central City.	C. W. Norton, Wilton.
W. P. Nichols, West Liberty.	H. D. Parsons, Newton.
O. P. Gibson, West Liberty.	E. C. Holland, Alton.
G. H. Burge, Mt. Vernon.	C. F. Curtiss, Ames.
J. W. Slemmons, Iowa City.	J. E. Gray, Columbus City.
G. D. Harrah, Newton.	C. M. Jones, Des Moines.
H. I. Davis, Grinnell.	Jas. Hook, Hedrick.
D. Leonard, Leonard.	A. Crawford, Lone Tree

## TREASURER'S REPORT.

To balance .....	\$23.52
Railroad fare, Wilton to Des Moines, one-half fare .....	4.50
Board on fair grounds, four days @ 75 cents .....	3.00
Ticket to state fair grounds .....	.50
Team on grounds with furniture .....	1.25
Paid for tables, chairs and cot for use in cottage .....	2.00
Foster printing .....	3.00
Three hundred programs and envelopes .....	3.00
Postage, 200 1-cent stamps .....	2.00
Postage, reports sent out .....	.50
Box and express on reports from Des Moines .....	.60
Railroad fare to West Liberty, annual meeting .....	.42
Railroad fare to Wilton .....	.42
Hotel bill, West Liberty .....	3.00
Railroad fare, Wilton to West Liberty to assist stenographer, report, Jan. 3, 1928 .....	.42
Dinner .....	.35
Railroad fare, West Liberty to Wilton .....	.42
Clerk, Jessie Henderson, stenographer, January 21st .....	5.00
Total .....	\$20.20

## AMOUNT RECEIVED.

By the names of 22 members @ \$1 each .....	\$22.00
By balance .....	19.20
Total .....	\$41.20

C. W. NORTON,  
Secretary and Treasurer.

Twenty years ago the Shorthorn Breeders' association was organized at West Liberty. It was thought by some it had now grown to such size that West Liberty with a population of about 2,000 was too small a city to entertain and banquet the two state associations, Improved Breeders' and Shorthorn Breeders'. Not so; never in the history of our organizations, have we been more royally entertained; all the latch strings were hanging on the outside. The cheery welcome address given us by Mr. C. S. Barclay and the cordial welcome received during our stay by her citizens, will never be forgotten by the members in attendance. The next annual meeting will be held at Iowa City. The day before the general or Improved Breeders' meeting, hand in any subject you wish for program at an adjourned meeting.

A meeting of the Improved Breeders and Shorthorn Breeders was held at the close of the general meeting to consider the question of uniting and owning the Shorthorn cottage conjointly. Mr. W. W. McClun offered a resolution to that effect which was discussed and declared lost by a very small majority, when a petition was circulated to raise funds to pay off the indebted-

ness of the principal \$116 (amount due since the construction of cottage) and an amount sufficient to remove the same near the ring where the Shorthorns are shown. About \$100 was pledged then and there for the proposed purpose. The secretary will be glad to receive further subscriptions to an amount sufficient to paint and repair in good shape on the grounds rented by the association at time of building. One hundred dollars was the estimated cost for removing, painting, foundation, etc., no subscriptions over \$10. And the one dollar annual dues should be forthcoming. As the outlook is good for our choice, the Shorthorn set all chip in and it will be easily raised.

C. W. NORTON,  
Secretary and treasurer,

WILTON JUNCTION, IOWA.

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