

PROCEEDINGS

OF THE

FARMERS' ASSOCIATION

OF



NOVA SCOTIA.

1895-6-7.

J. J. ANBLOW, PRINTER, WINDSOR, N. S.

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WINDSOR, N. S.:

J. J. ANSLOW, NEWSPAPER AND GENERAL JOB PRINTER.

1897.

OFFICERS FOR 1897.

President:

S. C. PARKER, Berwick.

First Vice-President:

GEO. C. LAURENCE, Port Hastings.

Second Vice-President:

J. RUFUS STARR, Port Williams.

Secretary-Treasurer:

PAUL C. BLACK, Falmouth.

Directors:

WILLIAM CORNING, Yarmouth.

F. M. CHIPMAN, Nietaux West.

W. M. BLAIR, Nappan.

F. R. TROTTER, Antigonish.

C. R. B. BRYAN, Durham.

Auditors:

GEO. B. MCGILL, Middleton.

WILLIAM McKERRON, Dartmouth.

To B. W. Chipman, Esq., Sec'y of Agriculture, Halifax, N. S.:

SIR,—I have the honor to submit the first Annual Report of the Nova Scotia Farmers' Association.

During the eighteen months the Association has been in existence, it has, perhaps, not fulfilled just that mission which it was intended it should, but it must be borne in mind that this period has been necessarily crude and formative; but, with the experience gained since its organization, your Secretary feels confident that this Association will do good practical work in the advancement of the Agriculture of Nova Scotia.

Respectfully submitted,

PAUL C. BLACK, *Secretary.*

Falmouth, N. S., 31st March, 1897.

BY-LAWS AND CONSTITUTION.

NAME :

1. This shall be known as the Nova Scotia Farmers' Association.

OBJECTS :

2. The special objects of this Association shall be,—

(a). To enable the farmers to confer together with a view to united action in matters connected with their profession.

(b). To afford an opportunity of bringing before all those engaged in rural industries any improvements and discoveries useful for introduction and practice in the Province.

(c). To secure the assistance of eminent scientific and practical agriculturists at meetings of the Association, and deliver addresses in the various sections of the Province.

MEMBERSHIP :

3. The membership of this Association shall consist of—

(a). One delegate or representative member from each of the agricultural societies organized under Cap. 39 of the Revised Statutes, fifth series.

(b). Two delegates each from the Nova Scotia Fruitgrowers' Association, the Nova Scotia Poultry Association, and any other society that may be approved by the Governor-in-Council.

(c). Any person may become a member of the Association by the payment of fifty cents, but such membership shall cease on the 31st day of December following.

(d). Any person may become a life member by paying the sum of five dollars into the treasury of the Association.

OFFICERS:

4. The officers of the Association shall consist of a President, Senior and Junior Vice-Presidents, five Directors, a Secretary-Treasurer and two Auditors. The Directors shall be chosen, as far as possible, to represent the different sections of the Province.

ELECTION OF OFFICERS:

5. The President, Vice-Presidents, Directors and Auditors, shall be nominated openly and elected separately by ballot at each annual meeting of the Association.

(a). The Secretary-Treasurer shall be appointed annually by the Managing Committee.

DUTIES OF OFFICERS:

6. (a) President. The President shall preside at all meetings of the Association, and perform such duties as pertain to his office; and, in his absence, or incapacity, his duties shall devolve upon the Senior Vice-President.

(b). The Vice-Presidents are expected to attend all meetings of the Association and Managing Committee, and take the place of the President in his absence or incapacity.

(c). The Secretary-Treasurer shall attend all meetings of the Association and Managing Committee, and keep a record of all proceedings, conduct the correspondence and prepare and publish an annual report of the proceedings of the Association. He shall receive all monies of the Association, and deposit the same in a chartered bank, and pay by cheque all bills payable in the way provided by the Managing Committee. He shall also prepare a financial statement to be submitted at each annual meeting. He shall give bonds in the sum of five hundred dollars for the faithful performance of his duties.

(d). The Auditors shall examine and report upon the books, accounts, and financial statement of the Secretary-Treasurer. They shall receive all necessary books and papers from the Secretary-Treasurer seven days previous to the annual meeting.

(e). The President, Vice-Presidents, Directors, Secretary-

Treasurer, with the Secretary of Agriculture as an advisory member without vote, shall form the Managing Committee, of whom five shall be a quorum to conduct the Association's affairs.

ANNUAL MEETING:

7. The Association shall hold a general meeting each year, at such time and place as the Managing Committee may appoint.

8. Each delegate or representative member attending the annual meeting shall be entitled to receive from the funds of the Society he represents the amount of his fare and return, and two dollars per day for travelling expenses, upon production of a certificate from the Secretary of such attendance, and such Society shall be entitled to receive, out of the funds of the Association, one-half of said travelling expenses on forwarding to the Treasurer of this Association the delegate's itemized account of his expenditure. Such travelling expenditure not to exceed twenty-five dollars.

9. Members of the Managing Committee shall be entitled to receive out of the funds of the Association their actual travelling expenses, estimated on the same scale as provided in the preceding Section.

PAYMENTS:

10. The President and Secretary-Treasurer, when authorized by resolution of the Managing Committee, will draw upon the Provincial Secretary, from time to time, for such portions of the grant allowed by the Governor-in-Council as may be required to meet expenditures authorized by the Managing Committee, and duly certified by them as correct, and all payments from the funds of the Association shall be made on the same authority of the Managing Committee.

11. Any amendments to the foregoing by-laws shall only be made at an annual meeting by a vote of two-thirds of the members present.

PROCEEDINGS
OF THE
NOVA SCOTIA FARMERS' ASSOCIATION.

Meeting of Organization.

Held at the Court House, Antigonish,
July 3rd, 1895.

Meeting opened at 8 p. m.

Dr. LAWSON, Secretary of Agriculture, was appointed temporary Chairman, and Paul C. Black as temporary Secretary.

Dr. LAWSON explained the provisions of the Act under which it was proposed to organize the Nova Scotia Farmers' Association, and stated that steps had been taken this afternoon to give it effect, by the passing of a resolution by the Nova Scotia Farmers' and Dairymen's Association, unanimously deciding to amalgamate that body with the new organization.

PREMIER FIELDING at the request of Dr. Lawson, explained that the object of the new Association was designed to promote our agricultural interests. It was not to be under the control of the government; it was to be controlled by the farmers themselves. The presence of government officials as members, was simply to give the government connection with it. The chief object to be served by the Association was the holding of a farmers' parliament at least once a year, so that farmers might have a suitable opportunity of bringing their views before the government and the people, formulating their grievances, suggesting remedial

measures, and giving and receiving information bearing upon farming operations.

PREMIER FIELDING also suggested a draft synopsis for by-laws, subject to revision by a committee appointed for such a purpose, and explained fully the conditions and responsibilities of membership.

Mr. Fielding was heartily applauded both at the beginning and close of his address.

The following were chosen as Committee on By-Laws: Win. Young, J. Rufus Starr, S. C. Parker, E. B. Elderkin, and J. Baillie,—committee to report to-morrow morning. John Donaldson, Port Williams, and J. B. Mackay, Stellarton, were appointed committee to examine the delegates' credentials.

The remainder of the session was occupied in carrying out the programme arranged for the meeting of the late Farmers' and Dairymen's Association.

Space will not permit of a full report of the programme, but we feel that the following address by A. B. Black, Esq., ex-President of the old Association, will be read with interest and profit.

HOW TO MAKE FARMING PROFITABLE.

A. B. BLACK, AMHERST.

After some remarks on the steady growth of the Association since its organization in 1884, and its grand work, especially in developing the dairying industry, Mr. B. stated that he had no new-fangled notions to present. He could not tell them how to make a fortune in a day, nor advise them to depend upon wind-falls or thunder-storms of luck, but to be content with what was far better—Progressive Prosperity.

Four principles were enunciated by adopting which he would guarantee success, under ordinary providential care, to every farmer of the land.

First.—Cultivate the mind.

Second.—Be thorough in all things.

Third.—Be honest and truthful.

Fourth.—Practice economy and industry.

By cultivating the mind we do not mean the obtaining a certain amount, or any amount, of knowledge. A man may pass through the whole curriculum of a college course, and yet, in the true sense of education, may be an uneducated man and prove a failure in any calling or profession he may choose. History, philosophy, mathematics, are by no means to be despised. But they should be used as stepping-stones to something higher. You may fill the mind with facts, but to *train* that mind to use those facts is a higher work. The mind must be trained to think, to reason, to draw conclusions, to build mind; and then to apply mind thus cultivated to the pursuits of life. To attain knowledge is good, but to cultivate the intellect is vastly better. Your seed may be good, but the best seed on an uncultivated soil will give you poor returns, so a large fund of knowledge with little thought and application leaves man a failure. Obtain other men's ideas, but think for yourself. Reason, reflect, draw your own conclusions and be a slave to no man. Early school advantages are greatly to be desired, but, if your opportunities in that direction have been limited, all is not lost. True culture is within your reach. Train the mind to think, to reason, to decide and act, and victory is yours.

Bring a mind thus cultivated, or in process of cultivation, to bear upon your calling. Fools think any kind of base material will do for a successful farmer. Thoughtful, practical men know better. Farmers, learn to respect yourselves and to glory in your calling. You will find scope for the exercise of your best and most matured powers on the farm. You are engaged in a many-sided occupation.

Among the many branches of farm life I would strongly recommend the making a specialty of some branch. Not to the exclusion of all others, but to give it the most prominent place in your thoughts and operations. Ascertain the adaptability of the soil you possess, and consult your own taste before making your selection; and, having made your choice, be not easily turned therefrom by the rotation of the wheel of commerce.

Much benefit may be derived by noting the plans adopted by the most successful farmers in your vicinity or elsewhere, but avoid becoming a mere imitator. While true science is always true, beware of science which is falsely so called. Do not scoff at scientific farming because many so-called scientific farmers have proved failures. There is applied science and misapplied science. Science may be defined "The Comprehension of Facts," and when these are judiciously applied, however modest your claims, you have the foundation of a scientific farmer.

Having laid such a foundation, I would lay much stress on *thoroughness* in all you do.

Doing things at hap-hazard and guess-work is the bane of prosperity. Let every piece of work be done in the best shape possible. It will pay in the end. The slipshod way of "This will do for the present" will prove fruitful in disappointment and loss. Aim to secure the *best* of everything required. The best stock, the best machinery, the best cultivation and the best crops.

In selecting from breeds, I venture to suggest:—The Jersey for butter, the Ayrshire or Durham for cheese, the Durham for beef and dairying, the Hereford for beef. Great care should be taken not to lose sight of the good points of an animal in any breed. However good the breed, an inferior animal should be rejected.

In securing the best results in cropping your soil, it is well known that thorough cultivation and bountiful fertilizing are domi-

nant factors. The plow, the harrow, the cultivator and roller, and suitable fertilizers, are known to be indispensable to the best results.

While you will fail to secure satisfactory results from any attempted analysis of the soil, you can, by cheap experiments, prove what is best adapted to your soil. Among all the fertilizers barn-yard manure must hold the first place; and both in its solid and liquid forms should be most carefully preserved.

Good seed is an important item. By obtaining samples from the experimental farm at Nappan, we soon had a good supply of fine oats weighing 44 lbs. to the bushel, which were eagerly sought for seed from different parts of the country. Grain for seed can be most satisfactorily improved by putting it through a strong wind and preserving the heavy grain at the head of the heap.

In selecting machinery, let the *goodness* of the article, and not merely its cheapness, be the first consideration. If an imported article is the best, the duty is but a small consideration. Get the machine that will run smoothly and lightly, and whose enduring qualities have been tested. If you can find it in your own country—well. If not, you need not suffer loss for the benefit of the home manufacturer.

There are some things which are often classed as little and insignificant, but are of great weight in summing up the profits of the year. Keep your fences, gates and bridges in thorough repair. On many farms the neglect of this simple rule, in the course of years, in breachy stock, loss of crops and injury to animals, leak out a snug fortune.

Among those supposed small things, the keeping up of a flow of milk in the dry part of the season may be mentioned. The plan adopted on my own farm, with, we think, considerable success, is, first, an early crop of oats, peas and vetches, for green fodder; then a few weeks' feeding of green corn, after which the mangold leaves come into good service. In all your plans, be cautious that no loose strings are hanging about to entangle you

in your course, and see that all your plans and your work tell for good.

Honesty and truthfulness are essential to a successful life. Politicians may sometimes seem to succeed by deception, dishonesty and intrigue, but the farmer will best conserve his own interests by cultivating transparent honesty—a character in which there is no guile. For us the old aphorism, "Honesty is the best policy" is emphatically true. To have the reputation of a thoroughly honest man is in itself a fortune. The late John McAdam, of Mill Town, N. B., respected, honored and esteemed by all, a successful lumberman and prosperous man, was known over the country as "Honest John." You may smile at the appellation, but there is the man from whom you wish to purchase and to whom you readily sell. By cultivating the habits of honesty and truthfulness in all your dealings you are courting trade and laying the foundation of success.

The dishonest man uses a two-edged sword. He cuts those who do business with him, and they in return soon cut their business relations. God formed man upright, but some men become fearfully and wonderfully twisted. The false, deceitful, intriguing man's prosperity is usually short-lived. He soon becomes despised by all. Who wants to purchase from the man who declares the cow he sells you will fill two pails with milk when she will only fill one, or who will sell you as a perfect horse one in whose tail is concealed a lump of lead to prevent the unseemly gyrations of that useful appendage? The honest and truthful man, "whose word is as good as his bond," is worthy of the highest respect, and secures that public confidence which is all important in reaching the higher planes of a prosperous life.

Economy and industry are indispensable in making farming profitable. The filthy and expensive habit of using tobacco is highly objectionable, while "dram-drinking" is a hundredfold worse, and often leads to utter ruin. Avoid the saloon as the gateway of death, and drams as deadly poison.

A few plain rules on economy must suffice.

1. Buy nothing needless because it is cheap.
2. Live within your income. Do not let the fine equipage of your neighbor tempt you to do likewise unless you can well afford it.
3. Pay as you go. Avoid debt, except valuable returns are clearly in view.
4. Cultivate industry till the habit becomes strong and you find active employment an enjoyment and a necessity.

One illustration of an honest, persevering, industrious and successful farmer. Two years ago, on the banks of the Missouri river in Iowa, I was invited to take tea with a prosperous farmer. He resided in a fine brick house, which was handsomely furnished. In the rear was a beautiful vineyard and orchard, while at the south end a large and well cultivated vegetable garden gave evidence of thrift and comfort. After tea, as we were admiring and tasting the luscious grapes, I ventured the remark, "I suppose, Mr. Iverson, when you settled here you brought a pretty full purse." "No," said he, "I brought only a few dollars, obtained as a farm hand. I purchased on credit forty acres of land. I built that small house (now used as a workshop). I have, by Divine goodness, made some progress, and certainly have no reason to complain." He now is the owner of 320 acres of valuable land, and the estimated value of his property is about \$30,000. Persevering, industrious, upright, thorough and benevolent, he had worked his way from small beginnings to independency and competency, belonging to a class of respected and honored citizens who would be a credit to any country.

In making farming profitable much will depend upon the character and habits of your wife. The trite saying, "A woman can throw out of the window faster than a man can shovel in at the door," has a strong underlining of truth. If young men were not so easily captivated with sweet smiles and pretty faces, in many cases, they would fare better. No one blames Jacob for

preferring beautiful Rachel to the weak-eyed Leah. Still, most women are fair enough for the majority of men, and there are other considerations of vastly more importance than mere externals. To the young man purposing to create a home, I venture to suggest: if practicable, select for your life's companion a girl of good common sense from a family where habits of economy and industry prevail.

Twenty-five years ago I purchased a farm. I had then much to learn, and am a learner still. Whatever of success has crowned my efforts I attribute, under Divine Providence, to a continuous effort (in many points faulty) to comply with the above rules. If I had my life to live over I would ask no higher position than an upright, advancing, successful farmer.

MORNING SESSION, July 4th, 1895.

The meeting opened at 10 o'clock, Dr. Lawson in the chair.

The first matter on the programme was the consideration of the report of the Committee on Credentials.

MR. HUGH MUNRO objected to the right of the members of the N. S. Farmers' and Dairymen's Association having votes on equal terms with the delegates from agricultural societies.

PREMIER FIELDING very lucidly explained that this was completely in accordance with the intention of the Act providing for the organization of the new Association.

MR. WHIDDEN, Antigonish; Col. W. M. Blair, Nappan; Mr. A. B. Black, Amherst, and Mr. J. Rufus Starr, Port Williams, all defended the old Association in this matter.

MR. J. M. BAILLIE, Stellarton, moved that the report of the Committee on Credentials be adopted; seconded by Mr. S. C. Parker, Berwick. Motion carried.

The Secretary then read the report, as follows: Delegates

from thirty-four societies, representing sixteen counties, Queens and Shelburne only being unrepresented; two delegates from the N. S. Fruitgrowers' Association; two from the N. S. Farmers' and Dairymen's Association, and twenty-one members of the Farmers' and Dairymen's Association; in all, fifty-nine members duly qualified to vote at the meeting.

The Committee on By-Laws next submitted its report.

Moved and seconded that this report be taken up clause by clause. Passed.

Moved and seconded that the time for discussion to each member be limited to two minutes for each clause. Passed.

The report was read clause by clause, and adopted.

The election of officers was next proceeded with. Messrs. B. W. Chipman and A. C. Bell were appointed scrutiners of ballots.

The following officers were elected:—

President—John B. Mackay, Stellarton.

1st Vice-President—S. C. Parker, Berwick.

2nd Vice-President—Geo. C. Laurence, Hastings.

Directors—Wm. Corning, Yarmouth; E. B. Elderkin, Amherst; D. McG. Johnson, Stewiacke; William H. Ferguson, Guysboro' Intervale; Isidore LeBlanc, Arichat.

Auditors—William Young, Kentville; L. C. Archibald, Antigonish.

A vote of thanks was tendered to the late officers of the Farmers' and Dairymen's Association. Mr. J. R. Starr responded in a suitable manner.

Meeting adjourned.

PAUL C. BLACK,
SECRETARY *pro tem.*

Meeting of Executive Commtee.

HELD AT THE COURT HOUSE,
ANTIGONISH, July 4th, 1895.

President John B. Mackay in the chair.

The following members were present : Hon. Isidore LeBlanc, D. McG. Johnson, E. B. Elderkin, Wm. Corning, S. C. Parker, and Dr. Lawson (member *ex-officio*).

Moved by E. B. Elderkin, and seconded by Wm. Corning, that the committee proceed to appoint a Secretary-Treasurer. Carried.

Moved by S. C. Parker, and seconded by Wm. Corning, that Paul C. Black, of Falmouth, be Secretary-Treasurer of this Association. Carried.

Moved by Wm. Corning, and seconded by Isidore LeBlanc, that the Secretary-Treasurer be given such remuneration as the Managing Committee may hereafter determine. Carried.

Moved that the Secretary-Treasurer be authorized to draw all money, and to pay all bills signed by the President. Carried.

In the meantime any necessary payments are to be made by the Secretary-Treasurer on the authority of the President.

The Secretary was instructed to notify delegates to submit accounts of expenses by Aug. 12th next.

Moved and seconded that the Managing Committee meet at Halifax on Aug. 22nd, a room to be provided by the Secretary of Agriculture. Carried.

Meeting adjourned.

PAUL C. BLACK,
SECRETARY.

SPECIAL CONVENTION
OF THE
NOVA SCOTIA FARMERS' ASSOCIATION,

Held in Margeson's Hall, Kentville, Jan. 21st and 22nd, 1896.

FIRST DAY.

AFTERNOON SESSION, Jan. 21st.

The meeting opened at two o'clock.

In the absence of the President, John B. Mackay, S. C. Parker, the first vice-President of the Association, presided.

There was a large number of agriculturists and others interested in farming present.

The following delegates were present: W. E. Armstrong, Granville Centre; P. Innes, Kings County Central Agricultural Society; Edward Harris, Pictou County Central Society; Ed. Foster, Dartmouth Agricultural Society; F. R. Trotter, Antigonish Society; Hugh Monro, Earltown Agricultural Society; John McDonald, Shubenacadie. S. M. Low, Pugwash Agricultural Society; E. J. Moore, Shubenacadie Agricultural Society; A. K. Patterson, East Aylesford Agricultural Society.

S. C. PARKER outlined the work of the Executive Committee since the Antigonish meeting. The first thing they had taken into consideration were some negotiations from gentlemen in Halifax regarding a cold storage warehouse at that place; and that

they would observe by the programme that several gentlemen would be there to address them on that subject ; that Major Clark and Geo. E. Boak, of Halifax, would address them on that question. That the matter of exhibitions would be a matter which would come before them ; that this subject, owing to a telegram from Mr. Corning, of Yarmouth, who could not be present, would be laid over until the meeting in the evening ; during the afternoon and evening the different matters which they had to discuss would come up systematically.

GEO. C. LAURENCE suggested delegates handing in their credentials.

It was duly resolved that Messrs. Elderkin, Laurence and J. R. Starr act as a committee on credentials.

The Secretary then read the minutes of the previous meeting at Antigonish, which, upon motion, was duly adopted.

J. R. STARR asked if the By-Laws and Constitution had been printed yet.

SECRETARY PAUL C. BLACK said they were not.

It was moved by J. R. Starr, seconded by Hon. I. LeBlanc, that members who became members of the Association at the Antigonish meeting, should retain their membership until the next annual meeting.

The motion upon being put was passed unanimously.

The meeting adjourned until 2 p. m.

The Convention met at 2 o'clock, p. m.

MR. J. W. RYAN, the Mayor of Kentville, on behalf of himself and the Kentville Town Council, presented the following

ADDRESS OF WELCOME.

To the President and Members of the Nova Scotia Farmers' Association :

GENTLEMEN,—It affords me very great pleasure to have the opportunity of extending to you in behalf of the Town Council and the citizens of Kentville, a cordial welcome on this occasion of your annual meeting, and to assure you of our hearty appreciation of the great importance of the interests it is the object of your Association to promote.

We esteem it exceedingly fortunate for us that you have chosen to hold your meeting here, first because we are proud of our little town and are naturally gratified at the honor your presence confers. We are especially glad to have the opportunity of forming and renewing pleasant acquaintances, not only with the distinguished gentlemen who as specialists in their respective departments of agricultural science are working at the great problems that are most fundamental to our industrial and commercial prosperity, and are here to give you the benefit of their discoveries and their wisdom ; but equally with the many representative practical farmers whom your session has brought hither from various parts of the province to inform themselves and each other from the results of their individual experience in the noblest of human vocations.

Then, too, we recognize a fitness in the selection of the shire town of the finest agricultural county in the province as the place for holding your conference. From its situation it is impossible that Kentville should have any material interests separable from those of the adjacent county. It is the prosperity of the county in which the town "lives and moves and has its being," and your deliberations will, we believe, do much to raise the standard of farming in this county and so indirectly confer substantial advantage upon the town.

No intelligent and broad minded citizen of this country can

fail to view, not simply with complacent satisfaction, but with ardent enthusiasm, the efforts that are being made through the enlightened liberality of the federal and provincial governments, and the public spirited disinterestedness of volunteer associations, to add to the wealth and prosperity of Canada in the most effective way in which it can be done—by promoting a knowledge of the most productive and economical methods in the various departments of agriculture. Not only then as citizens of Kentville, but as loyal citizens of this great Dominion, we heartily wish the Nova Scotia Farmers' Association not only a pleasant and profitable session, but a permanent and successful career of the highest usefulness to the province.

GEO. C. LAURENCE (2nd vice-President)—Mr. Chairman, ladies and gentlemen, I assure you it is with feelings of very great pleasure that it devolves upon me to say a few words in reply to the kind address which has just been presented to us. In the absence of Mr. John B. Mackay, our President, it has devolved upon me to reply. Had I a little more time I would have prepared one in writing and laid it before you in more fitting language than when called on now. I assure you that we have listened with great pleasure to this address by his worship, the mayor of this town, in the centre of the garden of Nova Scotia, in the beautiful County of Kings. Now, Mr. Chairman, it is not my intention to take up any lengthened space of time in giving you an address, but it simply becomes my duty to address his worship, the mayor, and gentlemen of the Town Council of Kentville, for the kind address, and thank them for the interest they have shown in the welfare of this Association. This Association is yet in its infancy, and we hope many things from it in future years to come in the development of the agricultural interests of this country; and judging from the large audience here to-day my hopes are increased. Again reiterating our kind thanks. (Applause).

The chairman asked the Mayor and Town Council and the Board of Trade to take seats on the platform.

M. G. DEWOLF, President, of the Kentville Board of Trade—Mr. President and gentlemen of the Nova Scotia Farmers' Association. At our annual meeting last night it was proposed that the President and Secretary of the Kentville Board of Trade should extend a welcome to your Association. In thinking the matter over, I knew that if we made a formal address, the matter we would bring up would bring tears to every eye. Now I think, in extending a welcome to strangers, we want to be the reverse. Therefore the Secretary and President of that Board concurred that the best way to do on this occasion was to make an impromptu address, as we knew that the Mayor and Town Council were desirous of addressing you on this occasion. We extend a welcome of the Kentville Board of Trade to the members of the Farmers' Association. We are also pleased to have you in our little town, and we will be pleased to give you such a reception that in future years you will come back again. I will further say that in the organization of our local board for the town our interests are identical with the Farmers' Association. One of our by-laws states that the board shall be made up of the residents of the town and all the farmers we can get. They are the people we want and have to have, and anything that is for the benefit of the farmers is for the benefit of the whole town and county. Therefore I need not tell you that our interests in the local board is the same as the interests for your Association.

With the help of Mayor Bigelow and W. H. Chase, of Wolfville, we have formed a County Board, for the purpose of getting in the farming population. We have our charter and we are now in working line. One of our strongest objects is to have facilities for the transportation of our fruit and agricultural produce, and storage and everything connected with cold storage—and therefore we can extend to you a double welcome. We are glad to see such a representative audience. We regret that your visit to Kentville is not at a season of the year in which the beauties of the county can be seen, for we need not tell you we have one of the most

beautiful counties in the province, and we would be glad to show you the surroundings of our town. And we hope when you return some day it will be in the autumn or summer season, when we can extend to you the courtesies of our board, and I know that the Town Council will co-operate in showing you the advantages and beauties of King's County. There is a great deal of valuable time to be taken up by your meetings, and before I take my seat I extend once more a hearty welcome of the local Board of Trade to you. (Applause.)

E. B. ELDERKIN—Mr. Chairman, ladies and gentlemen. It has given me very much pleasure to listen to the very kind words which have fallen from the lips of those who have just spoken to us, and the grand welcome that they have given us to this town of Kentville. We do not need it, for we know we are welcome, and we know that you have a kindly feeling for us, coming, as we do, as farmers from the different parts of the province. I was delighted with the address which has just been presented to us, and we are glad to know that you are progressing and reaching out for the welfare of all the interests of this county, and I hope that the other counties of the province will follow your example. All the interests of the province must pull together in order to make us what Providence has designed us to be, one of the grandest provinces in the Dominion of Canada. (Applause.) I feel sure that we have all come here with that object in view, and I feel sure that when we depart we will feel that we have gained an advantage from this gathering—and that when we go forth we will do our utmost to advance the interests of the agriculturists of this province, which will bring happiness and prosperity to the people.

HON. ISIDORE LEBLANC—Mr. Chairman, ladies and gentlemen. I did not expect to be called upon to speak here to-day. However, after hearing the kind remarks that have been presented to us by the Mayor and Town Council of the town of Kentville, and also by the Board of Trade of this town, I cannot help but rise to my feet if only to thank the gentlemen for their kindness.

This is my first visit to the town of Kentville, and I wish to tell you that I am very much pleased with the place. I have no doubt if we were here in the summer time we would see the great garden of Nova Scotia, in fact the great garden of this Dominion. I have heard of and tasted the fruit from this county, and have been very much pleased with it. These meetings will be a good thing for the whole province, and they ought to be kept up, and I hope they will always be attended by our best farmers and scientific men,—and I hope that before this meeting adjourns that we will hear from some of the gentlemen I see present, gentlemen who have devoted themselves to agriculture, who have prospered by that industry and whose names are known from one end of the province to the other. Thanking you for your courtesy of listening to my few remarks. (Applause.)

GEO. C. LAURENCE said he was glad to observe that the Board of Trade were calling into their councils the agricultural part of the community; by this means it would draw together the whole interests of the country, getting the voice of the different sections amalgamated with the interests of the towns, that the interests of the two should be amalgamated, for the one has to live on the other.

B. W. CHIPMAN said he was charged by the Premier to convey to the meeting his sincere regrets in not being able to meet with them on this occasion—now that parliament was sitting, and in the absence of two members of the government, he wished to convey his sincere regrets.

MR. WILLIAM YOUNG read the following paper:—

JUDGING AT EXHIBITIONS.

BY MR. WILLIAM YOUNG, KENTVILLE.

Mr. Chairman, ladies and gentlemen :—The subject on which I am to read you a short paper is one of very considerable interest to the farming community, for every farmer worthy of the

name always attends an exhibition held in his neighborhood, and I do not even remember to have attended an exhibition at which there was not more or less dissatisfaction expressed, both by exhibitors and spectators, at the way the judging was conducted, and the prizes awarded. Of course there must always be some dissatisfaction. You cannot expect the man who has been defeated to be quite as happy as the man who wins the prize; but I do not think the average spectator would be dissatisfied if the judging were conducted in a really satisfactory way. An exhibition properly managed would be a school for us farmers; an object lesson in the successful practice of our profession. In a Provincial Exhibition are brought together, or should be brought together, all the best animals produced and the best work done by the farmers of the province, so that every farmer going there should go with the certainty of obtaining instruction by comparing his own efforts with the efforts of the exhibition, and of seeing whether his neighborhood is up with or far behind the times.

But the method in which prizes are awarded is the soul of an exhibition. On that, in the long run, depends the attendance of a large class of exhibitors, and on its being well done depends the success of an exhibition, considered seriously, and as a means of agricultural education. For if the judges inspired confidence the awarded prize list at our exhibitions would be a chart for the guidance of the farmers. It would be to them what the compass is to the mariner; what the law is to the lawyer in the practice of his profession. To secure good judging, the first thing to be considered is the kind of judges to select; of course every one knows that they should be men with some practical experience with the exhibits they are to judge, but though we all know this we do not really carry it out in practice. Ludicrous choice of judges are made at nearly every exhibition, and when you have as you had at the last Provincial Exhibition a farmer without knowledge of seamanship judging the models of ships and yachts, and a first prize for ale and beer awarded to bottles of colored water, and

merchants with no experience of mechanics judging such articles as locks, it is not unnecessary to call attention to the fact that in choosing a judge one should be chosen with some elementary knowledge of his business in choosing a judge for farm products, beware, above all beware of the gentleman amateur. Choose either the professional judge or the professional farmer. And great care should be taken that the judges have no relatives or connections among the exhibitors, for no matter how impartial he may really be, any prizes that he may award to his relations will give great dissatisfaction to the public. And when we have got our judges appointed, and have selected the best men to be had, I do not think we have done all that can be done. We must bear in mind the infallibility of human nature, how judges differ, how necessary it is to guard against human prejudice, and the suggestion I have to make to you to-day is that the Farmers' Association—the Farmers' Parliament as we are fond of calling ourselves—should frame a code of law for the guidance of the judges at all our Nova Scotia exhibitions, or in other words to establish a score card or scale of points in which 100 points will be the highest attainable, and to award all prizes in accordance with the number of points attained by any exhibit. And I believe that such a method of judging would be fairer to the exhibitors, easier for the judges and infinitely more satisfactory to the public. At all events it is surely worth while giving the method a trial, for nothing could be more unsatisfactory than our present method, with the judges chosen and the prizes awarded in the most happy-go-lucky fashion.

In framing a prize list for an exhibition we should remember that Nova Scotia is not as yet a very rich country, and that the managers of all our exhibitions are always hampered by lack of means, and we should endeavour to concentrate our prizes as much as possible and not try to cover too much ground. By concentration, I mean we should select as worthy of prizes those breeds of stock most suitable for Nova Scotia agriculture, and we

should give prizes to them, and to them alone. Let us take cattle first; cattle we keep for two main purposes, for beef and for the dairy, and we should allot the prize money to two special breeds, the one that we consider the most suitable for beef purposes, and that breed of dairy cattle most suitable to the climate of the province. So much for thoroughbreds and so much for grades, for I would always allot a good share of prize money to grade cattle, and I would do that as much in the interest of breeders as in the interest of the ordinary farmer. For it is only by encouraging the farmer to keep grades, that he will ultimately arrive at keeping thoroughbreds. Besides, you can always secure a fine exhibition of grades, and the more exhibitors the more interest is taken in an exhibition. There are three main breeds of beef cattle, the Short Horn, the Hereford, the Polled Angus.

For practical purposes they do not differ much. All these breeds are excellent machines for turning hay and roots into beef, but the farmers of Nova Scotia who have tried all three breeds seem to be almost unanimous in their opinion that the Short Horn is the best adapted for the average farmer. And the farmers are a competent tribunal to decide that question, and from their verdict there should be no appeal; and I believe the reason the Short Horns are so much more generally distributed through this province and Ontario than either the Polled Angus or the Hereford, is that the Short Horn cattle have been found the most profitable. In framing a prize list for beef cattle then, this should be taken into account, and the greater part of the prize money should be awarded to Short Horns and their grades. I do not mean that I would allot no prizes at all to either Polled Angus or Herefords, but I would make the prizes for these breeds very much smaller than for Short Horns, and I would allot no prizes at all for their grades in order that the average farmer would not be encouraged to breed them.

And for dairy cattle I would proceed in the same way. I would select that breed best adapted for dairy use in this province.

There are four main breeds—the Ayrshire, Jersey, Guernsey and Holstein. The Guerneys do not, I think, differ sufficiently from their cousins the Jerseys to warrant us in Nova Scotia establishing a separate class for their benefit.

The Jersey next. I am getting more doubtful every year whether the Jersey is hardy enough for profitable use in this climate. There seems to be no doubt that the thoroughbred is terribly lacking in strength of constitution. From all over the United States come reports of Jersey herds afflicted with tuberculosis, and I notice that one of the leading breeders, Mr. Haver-meyer, is going to discard thoroughbred Jerseys altogether on that account, and is experimenting now with Simmathaler cattle. But the breed is widely distributed through the province, many farmers—especially they who raise Jerseys to sell—are enthusiastic in their favour. And I would now allot one-half the prize money to Jerseys and their grades, though I believe in the future they will give place to a hardier and stronger breed.

The Ayrshire cattle, bred for generations in a damp, cold, stormy country, have been exposed generation after generation to a climate almost as trying as our own. They are much hardier than the Jersey, and almost as suitable for general dairy use. I would allot one-half of the prize money for dairy cattle to this breed.

Coming next to the horses. They are kept in this province for three main purposes: (1) for light driving, (2) for carriage purposes, or drawing a load at a moderate speed, (3) for heavy teaming; and for each of three purposes, there are several distinct breeds. For light driving and for speed, the standard bred horse, or the American trotter, is without a competitor; and he should have, and of course will have, a class by himself, for the trotter is more widely distributed and appreciated than any other breed in Nova Scotia.

For the carriage, a good general purpose horse is wanted—weighing twelve or thirteen hundred—and able to travel easily

eight or twelve miles an hour with a moderately heavy load. This is a horse very much needed in Nova Scotia, and one that would repay the farmer for breeding better than any other. There are three well-known breeds of carriage horses: the French coach, the English hackney, and the Cleveland bay. I think we should endeavor to decide which is most suitable for introduction to this province, and then urge the government to make a large importation selected by practical men; and encourage the farmers to breed them by large premiums at our exhibitions. I do not think we should endeavor to encourage all three breeds. Our resources, as I have said, were limited, and by trying too much we may end in accomplishing nothing at all. Which breed would be the most suitable I do not myself know, but if all hackneys are like those of the government importation, I do not think it worth while to encourage them very highly.

For draught purposes, the Clydesdale and the Percheron are the only two breeds at all widely distributed through the province, and I would give prizes to them alone. And as the Clydesdale seems to be the most popular, and to be gradually driving out its competitors, I would allot the larger share to that breed.

While I believe sheep to be the most profitable stock a farmer can keep, they cannot be kept at all in many parts of the province owing to the dogs. It is pitiful that we cannot bring enough influence to bear on the government to ensure the enactment of a satisfactory dog tax. Until that is done, keeping sheep in this province will be risky and unprofitable. But where, owing to the scarcity of dogs, it is possible to keep sheep to a profit, I believe that the Leicester will be found to be the most serviceable all round breed. The Shropshires, of which I have kept a flock for the last four or five years, seem to me to require very great care, and are liable to deteriorate unless excellently well kept. I do not think that the Cheviot merit any encouragement in this province; it is true they will make a living where other sheep would starve, but their size is against them. When a man goes

in for keeping sheep, he ought not to be satisfied with animals the size of a rabbit.

In swine there are two breeds which seem to be popular here, the Berkshire and the White Chester; the former the best suited for those in want of a light carcase rapidly matured, and the White Chester the best of the heavy breed. I would, therefore limit the prize to those two breeds, and to them alone.

In poultry, too, I would give the highest prizes to those two or three breeds best adapted for the general farmer's use.

This principle of concentration is not, I believe, good in itself, but I advise it as a choice between evils. At present there is no market for thoroughbred stock in this province. It is not possible for anyone to import really first rate thoroughbreds without incurring heavy loss, and the province is full of all kinds of second and third rate cattle. If prizes at our exhibitions were given only to those breeds best adapted for the province, they would be of sufficient value to lead to keen competition, and the honour of winning might encourage breeders to import really first rate animals. It was by concentration that the farmers of the Clydesdale developed the famous breed of horses that brought such wealth to the district. It was by steady perseverance along well considered lines that the Jersey cattle were gradually developed to the perfection we now see. It was by well considered steadfast work that the Shorthorns were created, and it is because the energy of the farmers of Nova Scotia has been dissipated in all directions, that so many farms are stocked with animals that have no valuable characteristics whatever.

I have now to make a practical suggestion which I wish to embody in the form of a motion later on in the afternoon; and it is that this Association should now appoint a committee to frame a scale of points and a prize list to be in use at all our exhibitions in future. My idea is this: that the committee should be composed of farmers as near together as possible who should

consider the matter and report to the executive of this Association, which report, after having been submitted to the executive and modified as they shall see fit, should be by them put before our next annual meeting for final action. In conclusion, I may say there are two points in the matter which seem to be very important: 1st, that the score card or scale, if we adopt, should only be adopted after mature and careful consideration; 2nd, that it should be published in our annual report, in order to be easily accessible to the average farmer, and to avoid the dissatisfaction which will undoubtedly be felt if that information is only obtainable by those who have exceptional opportunities.

WM. YOUNG said that he thought it would be well to appoint a committee of farmers who could meet together to form a score card for use at our exhibitions, and after having done so they might be instructed to submit it to the executive of this Association—then it might come before the Farmers' Association at their next meeting, and if approved by the Farmers' Association, ask the government not to give any aid at which the score card was not used and expert judges employed. (Applause).

E. B. ELDERKIN said he was very much pleased with the remarks of Mr. Young, and he was sure that in giving them a subject for discussion he could not possibly have succeeded better. (Applause). He said he agreed with Mr. Young in regard to judging by points. It would be easy for them to benefit by those who had given the matter a great deal of time and attention in the past, but you cannot lay down a cast iron rule to govern every exhibition. He said it would be much better to go outside of a community to get judges, as it would be almost impossible to select judges in a given community who were not related to the exhibitors in one way or the other, and if such was the case you could not have an unprejudiced mind free to act one way or the other.

LEANDER RAND said that last fall he got a post card from the secretary of the exhibition asking him to be a judge of sections

63 and 64. It covered roots, grain, I do not know whether it covered anything else or not, and I was asked to reply to it. I said I would. Not very long after I got another post card asking me to be a judge of some 14 or 15 sections. I did not reply to that at all. I went to Halifax, and I was put into a set of judges to judge steam engines, yacht models, fire ladders, pictures, and I do not know how many other things. I never built a fire in a steam engine in my life, but I am a grand judge. (Laughter and applause). I never saw a fire ladder until I saw the one in Halifax. Of course I knew all about it. If that thing is carried out where in the heavens is it going to end. It appears to me that it was the greatest humbug in the world. Another thing I had to judge was agricultural implements. I know a good plough when I see one—but there was only one plough that came there, and that plough came from the Province of Ontario, and had no price marked on it. We also had some barrels—I know what a good barrel is; I never made a barrel or shaved a hoop—but of course I had to judge. If you cannot get any better judges than I was it would be better not to have any and let it go.

P. INNES.—Mr. Chairman, Ladies and Gentlemen: We have listened with much pleasure to the paper that Mr. Young has just read—and I think for an amateur gentleman farmer it is a very excellent production. It puts me in mind of some school boy's production, who only required age and experience to bring something forth. (Laughter and applause).

The subject of agriculture has occupied the attention of the human mind from time immemorial, and has been the subject of study of learned men of all ages who have grappled with and understood its principles and precepts, yet he in the fulness of his ability decides everything right off, and there is but one subject that he omits, and that is a subject he knows all about, and that is the interesting subject of Bee-culture. (Great applause). If he gave us his experience in that line it would be complete, and you would not have wanted anything else to-day. But apart from that

there is chaff of wheat that this meeting should take into consideration, and that is the benefit of having a score card or judging by points. Let a judge be as competent as he can be, it is impossible for that judge to retain in his mind a correct view of the points on which he is to arrive at his decision. With a score card he could satisfy all the parties, and anybody dissatisfied with his judgment could see how his judgment was made up. In that view his paper deserves a great deal of attention and consideration at the hands of this meeting. (Applause).

E. B. ELDERKIN moved that this convention express its opinion, that it was advisable as far as possible in future that judging at exhibitions should be by score card and by expert judges.

WM. YOUNG advocated the appointing of a committee to do the work. As regards the scale of points that have been adopted at other exhibitions he had read them over, and some of the scales would not be assented to by Nova Scotian farmers. And with regard to expert judges he did not wish to have them except in regard to farm stock. If you get a good class of expert judges you get a judgment that is of immense value. If the judges place on the score cards the reason for their judgments it would be of immense value. He also said that he did not see how they were going to judge bees.

S. C. PARKER—Judge by points. (Laughter).

A Voice—What score cards would you use? Those in existence now?

WM. YOUNG—If we publish a list or scale of points, exhibitors would know what points of excellence would ensure them winning the prize.

JOHN DONALDSON said he did not approve of appointing a committee of farmers of Kings County to draw up a draft of points; that matter should be left to the breeders.

R. W. STARR said that the matter of score cards was pretty

well thrashed out in other countries, and we could very easily gain all the experience in that direction from other countries. With respect to judges—he advocated doing away with committees—make one man do the work and make him responsible for that work. If you want three men to do the work divide the work,—and make each man responsible for a certain section of that work. If anything goes wrong then one cannot blame it on the other.

OSCAR CHASE seconded E. B. Elderkin's resolution.

MR. MOORE said he concurred with Mr. Elderkin's motion.

P. INNES asked what a resolution at this meeting amounted to?

Chairman said that the Government would carry out anything adopted by them in this matter.

J. A. KINSMAN said that they should adopt a score card on a grade if they were going to ask for expert judges.

RALPH EATON said that it would be well to publish the scale of points that will be used by the judges before the exhibition takes place, so that the farmers would know what different points would be taken into account.

HERBERT STAIRS suggested using the scale of points used by the Toronto exhibition.

E. B. ELDERKIN asked what was the scale of points used by the Toronto exhibition.

H. STAIRS said they used a scale of points for each breed, Shorthorn, Hereford, Jersey, Guernsey, etc.

H. STAIRS moved that they use the same score card that they use in Ontario.

JOHN DONALDSON advocated using a scale for fruit and vegetables also.

RALPH EATON seconded Mr. Stairs' motion.

GEO. C. LAURENCE said he was much pleased with the discussion, and he heartily agreed with the resolution of Mr. Stairs,

and thought it was absolutely necessary that it should be adopted. He thought the Association could not do better than by adopting the score card used in Ontario for cattle. He thought that the people of Kings County could make a score card for fruits better than could be got abroad.

MR. STAIRS reiterated his motion that this Association use the same score card that is used in Ontario with respect to live stock.

The motion on being put was passed unanimously.

PETER INNES moved that the Nova Scotia Fruit Growers' Association be asked to give a scale of points for fruits and vegetables.

Passed unanimously.

Meeting adjourned until this evening.

EVENING SESSION.

Meeting opened at 7.30 o'clock.

Acting President Parker called on Prof. E. E. FAVILLE, of the Horticultural School at Wolfville, for a few remarks.

PROF. FAVILLE delivered a most interesting address on "Some Important Points in Fruit Culture." We regret that we were unable to secure a report of this address. Practically the same information will, however, be found in the report of an address by Prof. Faville at Middleton.

The President next introduced Mr. W. W. HUBBARD, editor *Coöperative Farmer*, Sussex, N. B.

SHEEP RAISING.

W. W. HUBBARD, SUSSEX, N. B.

Mr. President, Ladies and Gentlemen:—I can assure you that it affords me a very great deal of pleasure to be able to come over to your lovely garden spot of Nova Scotia to meet so many people

who are evincing in such a practical and interesting way their interest in agriculture. I always feel, when I am coming over from the Province of New Brunswick across that isthmus land, like raising my hat when I come into the Province of Nova Scotia—(applause)—this great little province, with its great natural wealth—and ere long I think will outshine the larger parts of the Dominion. You have sent forth from this little province some of the most distinguished men in Canada—and in your progress in the development of agriculture and fruit-growing it augurs well for the future. I need not tell you also that I congratulate you on the beauty of its people, and I am sure they must take a great interest in this work when so many gather here on this occasion.

Now, I have the honor to represent here to-night the Farmers' and Dairymen's Association of the Province of New Brunswick, and I can assure you that I wish we could have more beneficial reciprocity of thought and feeling in connection with the development of the resources of our province—particularly the agricultural resources. We have been content in the past to live inland—we have been too provincial—and we may have forgotten that we were all Canadians, to a greater or less extent; but our provincial ideas have grown, and I hope, before Confederation is long forgotten, that we will be alive to the fact that this great country, from the Atlantic to the Pacific, is our heritage, comprising, as it does, the larger half of the North American continent—that we ought to be proud of it—and we should be a united people in all respects, and particularly in the matter of the development of those resources that go to make up the wealth of a country. And I need not tell you that we would be glad to see a goodly representation of your people meet our Association in Fredericton the week after next.

I was asked to speak to you to-night upon a practical subject, but as the hour is late, and you are getting more or less rather tired, I do not think I will go into the subject of sheep raising very deeply. There seems to be a certain amount of opposition

to the growth of sheep in the Maritime Provinces, — the statistics from 1891 to 1894 in these provinces showing they have decreased 175,000. That is a large decrease, and there must be a reason for it. Why is it? Is it because our natural resources are not fitted for sheep life? I do not think so. Is it because we have a distaste for that pastoral husbandry? I do not think so. The laziest man among us can raise sheep on a farm. I do not know of any stock-raising business that gives less actual hard labour than the rearing of sheep. It would simply look, as my friend here has just remarked, that the people of the Maritime Provinces prefer dogs to sheep, and it has been impossible in the past to secure legislation to protect the poor harmless sheep from the ravages of the dogs. A few years ago a man in Fredericton lost seventy sheep in one night by two dogs. Stock husbandry of this nature would bring to this province enormous wealth, if it were developed and protected.

You here in the Annapolis Valley are doubtless interested in fruit growing, but there may be some among you who may have a taste for dairy farming, and, if so, you can with great profit keep a flock of sheep. And I think, Mr. President, it would be well within the scope of this Association to discuss this matter for the protection of our sheep, and make recommendations to the powers that be to make laws with respect to the protection of sheep from dogs in this country. I would further urge the three Associations in the three provinces to bind themselves together to make the plea still stronger. Now that is only one branch of farm work which we can add to our fruit growing to round out our system of agriculture.

We know that the people of Nova Scotia are justly proud of themselves and of their province, but we in New Brunswick do not feel that we have to take a back seat in every respect. We would like to be considered good neighbours, and we ask your assistance and your encouragement in helping us along in our work in the development of agriculture.

I must congratulate you on the magnificent gathering here this evening. I am sure that it is an evidence that the people of Kentville are taking a great interest in your work, and it augurs well for the fruit-growing industry and all branches of our agriculture, and for the good of our province in general, when the people of every walk in life come out and evince such an interest and give such a respectful hearing to a somewhat technical part of the subject of agriculture.

Thanking you very much indeed for your kind attention.
(Applause.)

This evening's session was enlivened by selections rendered by the Kentville Male Quartette, which were listened to by over five hundred persons, the hall being packed to its fullest capacity.

Meeting adjourned at 10.30 p. m.

SECOND DAY.

MORNING SESSION, WEDNESDAY, Jan. 22nd, '96.

The convention assembled at 10 a. m., S. C. Parker in the chair.

EXHIBITIONS.

GEO. C. LAURENCE.—In order that this matter may be brought up in a regular way and placed before your assembly so it can be readily and intelligently discussed, I hold in my hands a resolution prepared for that purpose which embodies the views of the executive with regard to the holding of a provincial annual exhibition. I will read the resolution—

"*Whereas*,—This Association having had under consideration the proposal of an executive in conjunction with the exhibition commission of the city of Halifax, for the purpose of securing grounds in the city of Halifax and erecting thereon good, permanent and other necessary buildings for the purpose of holding an

annual provincial agricultural and industrial exhibition, to be under the management of the province and city, the funds and guarantee of prize list to be borne jointly and in equal portions by the province and city ;

"Be it therefore resolved,—That this convention heartily approve of such a scheme, under condition that such scheme in no way interfered with the provision made by the legislature for the holding of county exhibitions under the Acts passed in 1895 ;

"And be it further resolved,—That this convention respectfully ask the favorable consideration of the government and legislature of the province."

I wish to say, Mr. Chairman and gentlemen, that after our appointment to the office of executive managers of the Farmers' Association at the meeting held in Antigonish, we took up our work at as early a date as we could and met together and talked the matter over, and, to our surprise and astonishment, the more we considered the matter, the more we looked into the duties the Act imposed upon us, the more we felt the responsibility placed upon our shoulders to uphold the duties assigned to us. We felt our task was an onerous one and required abler men than we were to cope with it—that it required all the intelligence and best brains that the Province of Nova Scotia could produce. One of the first questions that came before us was this matter of holding exhibitions, and in connection with that subject we took numerous schemes under consideration ; but, as "Rome was not built in a day," we felt that a great deal of labor, time and attention should be given ; as this being a new institution, experience on our part in the conduct and management of it was largely wanted.

At our first discussion, when we took the matter up with respect to exhibitions, I will not say that we felt they were a failure, but we felt that the province at large was not deriving as much from our system as they deserved, and we came to the conclusion that our annual central exhibition for the whole province to be held in some central point, and to be annually held in the same place would be of far more usefulness and benefit to this province ;

and we felt that, taking this view of it, almost every aspect strengthened our opinion that it was the best mode of procedure, and commanded our attention. After looking at it from every point of view, we have come to the unanimous conclusion, after a thorough discussion, that we are on the right track, and that the scheme we propose will be of the most importance to the industrial and agricultural interests of the province, and that scheme is the holding of an annual industrial and provincial exhibition in the city of Halifax. We have selected the city of Halifax as being a central part, having attractions and advantages of no other place in the province. They have the army and navy there, good hotel accommodation, and everything to induce a large crowd to attend; and, having it at such a central point, the fares also can be brought down to a minimum. In considering the matter, we visited the city of Halifax, and were cordially received by the members of the Exhibition Commission and also by His Worship the Mayor and City Council of the city of Halifax, who readily and willingly offered to bear one half of the expense we entailed by the necessary grants, buildings, etc., and also assume a guarantee of one half of the prize list. We felt that we could, under this scheme, increase the prize list and offer larger inducements to the farmers, and hence bring a larger exhibit than any other section of the province. We waited upon Mr. Fielding, the Premier of the province, and explained our views to him, and we received from him his cordial co-operation. We said we could not touch this scheme unless we received some guarantee that the County Exhibitions would not be disturbed, and he assured us such would be the case. He said he would do everything in his power to help out any county that proposed holding an exhibition, and he assured us that in every way possible the resources of the province were at the disposal of the agriculturists of the province. (Applause).

EDWARD FOSTER (Secretary of the Dartmouth Agricultural Society) seconded the resolution.

He asked for some information with respect to County Exhibitions.

MR. LAURENCE—This scheme does away with District Exhibitions, but does not touch the County Exhibitions. The present Act provides for three classes of exhibitions. We do not touch the District Exhibitions for 1896.

MR. LOGAN—What scheme has the government got to raise the money? How are they going to levy this on the province?

MR. LAURENCE—The funds are provided by the Provincial Government in the same way as other funds are provided. A grant of \$50,000 for this purpose simply means \$1,500 a year. They can easily raise the money at 3%. Now, there is no way in which this province can be benefited so much than by this expenditure.

MR. P. INNES—Mr. President and gentlemen, it seems to me that the Association has taken a large step in considering this matter of Provincial Exhibitions. I think they are going too far in asking this meeting to come to a decision. We have had no notice that the matter would be brought up here for discussion. The different societies gave their views a year ago, and have all become reconciled. I, as representing a society, would not be able to give my vote in favor of it. The majority of our society are against it. As an Agricultural Exhibition in Halifax it was a failure the last time. Who were the parties who showed their stock and fruit—was it the professional agriculturists? No, it was not a representative farmers' exhibition. I find now, from residing in the country and coming in contact with the farmers, that they say they have no chance at these exhibitions. What ordinary farmer is there among us who can leave his farm for a week and go down to Halifax, and, even if successful, get one-half of his expenses back in prizes. I know a gentleman who got \$20, first prize, at the last exhibition, but it cost him all that for his expenses. We do not know what the city of Halifax will do—what

proportion they will take in the management, whether they will run it by the merchants of Halifax, or, whether the agriculturists of the province will take that stand they ought to take. Heretofore the merchants have run it. With these views, I hold that it is premature for this meeting to come to any conclusion on the subject.

C. G. GODFREY read a resolution adopted by the Yarmouth Agricultural Society, which was adverse to the scheme now proposed by the executive. He said that he and Mr. Simms were present, on behalf of that society, to place before the convention the resolution which they had adopted.

MR. G. DEWOLF read the following extract from the annual report of the Kentville Board of Trade of last year, as follows:—

"The question of the permanent holding of Provincial Exhibitions in the city of Halifax was agitated by the different Boards in the province, and at the adjourned regular meeting of this Board, held on February 8th, a resolution was passed asking our local members to co-operate with the different Boards of Trade and Agricultural Societies in the province in asking for the repeal of the Act of 1892. As a result of this movement the Act was so amended as to allow District Exhibitions to be held at two points in the province every third year, the other year to be given to County Exhibitions."

Mr. DeWolfe advocated the holding of County Exhibitions, and said he was opposed to the present scheme.

MR. CORNING said that he differed from the views of Mr. Laurence, and that the executive was not unanimous.

MR. LAURENCE—When I spoke of the executive committee being unanimous, I had forgotten to say that Mr. Corning was ill and detained at home, and we had no opportunity of knowing his views.

MR. CORNING said that they were not prepared for the question. The country did not understand it intelligently, and the province of Nova Scotia was not fairly represented there on that occasion.

E. B. ELDERKIN said there seems to be some misconception with regard to this matter, and some little lack of knowledge to correct it. He said he was sure they were all desirous of advancing the interests of the province. As far as he could see there seemed to be some objection in the mind of the people against the running of exhibitions by the city of Halifax. It is now proposed that the province of Nova Scotia and the city of Halifax shall unite, shall bear equal proportion of the expenses of purchasing the grounds, erecting the buildings and making up sufficient grants for exhibition purposes—that the province of N. S. and the city of Halifax guarantee the prizes. Now, what more can you ask for? What more do you want? If that is not a generous offer from the city of Halifax I do not know what is. The proposition is that they will require \$100,000. \$50,000 shall come from the province, and \$50,000 from Halifax city. It may not be all used now. What is wanted is an exhibition building that will be a credit to the province. I believe the farmers of Nova Scotia have sufficient intelligence to take their place beside any other men on this globe. They can run an exhibition here as good as they can in Toronto. We have in this province a variety of exhibits that we can be proud of, and by showing our exhibits to the people we can bring into this province a capital which will be of incalculable benefit to us. There is lying in the Republic south of us millions of dollars, which they will be only too happy to invest in Nova Scotia if we can show them the avenue to invest it in. Down on this line of railway, where there is one acre ploughed there must be hundreds of thousands of acres not ploughed. How much money has ever been left in Kentville by these exhibitions? It is true, exhibitions have been carried on in Yarmouth without any grant. What is it that Yarmouth has not made a success of? They go into it with a determination and make it a success. That place is unique in this province of ours. We want the whole province of Nova Scotia to be what Yarmouth is. (Applause.)

MR. STAIRS moved that the delegation from Halifax be heard.

ALDERMAN J. HAMILTON—Mr. Chairman and gentlemen, I do not know that we are here in a representative capacity. We are not members of the Association. We are members of the City Council of the City of Halifax, and we have come here out of curiosity. Since 1890 there have been two exhibitions held in Halifax, and I think the citizens of Halifax, represented by the City Council, have come to the conclusion that those exhibitions in the past, run upon the lines on which they have been, have been failures, so far as the city is concerned. Every exhibition held there has cost the city from five to ten thousand dollars. The last exhibition cost the city, directly, \$8,000. Now, you all know that the present grounds are cramped and too small—that the buildings are out of repair. It is pretty hard to keep them in repair to hold exhibitions once in three or five years. And the City Council, at a meeting held three months ago, before this matter was mooted by the Farmers' Association, passed a resolution that they would not contribute again to an exhibition to be held in the same grounds and buildings—and that if there was to be any future exhibition held there, they want it held on the lines of the ones held in Toronto and Montreal, and, later still, in St. John. The exhibition held in St. John last year, the greatest portion of the exhibits, and fully one-half of the attendance, came from the Province of Nova Scotia; and if our people have interest enough in exhibitions to go over to New Brunswick, I do not see why they would not go to one in their own province. As Halifax is the centre of this province, and all lines converge there, my opinion is that it is the right place. We do not wish to deprive any district of holding an exhibition if they want to. I know if this scheme is carried out as proposed, and the exhibition is held in Halifax, the city will give one-half the grant to get the grounds and erect the buildings; and, as far as the management is concerned, they do not want to control it.

G. J. TROOP—Mr. Chairman, I suppose the gentlemen here are interested in hearing what the citizens of Halifax think in regard to this matter. The gentleman who has just addressed you is a representative man. I do not occupy that position. He has explained what the City Council have in view if the exhibition should be held in the city of Halifax. I think I may, with propriety, refer to some observations of one of the gentlemen who has addressed you. He spoke of the city of Halifax having had exhibitions and having had professional exhibitors.

MR. INNES—I meant professional exhibitors from the country—parties who purchased products and showed them off as their own.

MR. TROOP—I think the explanation is a reflection upon the farmers of Nova Scotia. I do not see that that charge is placed upon the city of Halifax.

A VOICE—It is not.

MR. TROOP—What is the inference—it was given here as an illustration of the impropriety of holding exhibitions in Halifax. Now, on behalf of the citizens of Halifax, I can say that we have always approached the gentlemen, and always believed the parties who came with their exhibits from the country were *bona fide* owners of the property. I was very much amused at a question asked here—"Is the Province of Nova Scotia going to be taxed for an exhibition in Halifax?" Have we not been doing it in all years past? And I wish to say, as you have already heard, that the 40,000 inhabitants of the city of Halifax are willing to contribute one-half the amount required if the whole province furnishes the other half. Now, I would like to know if there is a man here within the sound of my voice who does not feel that Halifax has done a generous thing.

MR. INNES—There has been a large amount of eloquence used here to-day on Nova Scotia and its advantages. My contention is that this subject of exhibitions has been started at this

meeting, and that we are not prepared to come to any decision on it. We hold no mandate from our constituents.

S. C. PARKER, in regard to the imputation that this matter had been sprung on the meeting, said that at the meeting in Antigonish in July, 1895, there was a representation there from every county in the province, and also of nearly every agricultural society, as well as a large and enthusiastic meeting of the best farmers. That the Society had been duly organized, and an executive appointed composed of men from all the different parts of the province. He claimed that this was the most representative body of farmers that ever was organized in Nova Scotia. That they had had four or five meetings of the executive committee. They had felt that the Exhibitions in Halifax had been mismanaged in the past, but they did not propose to let Halifax manage them in the future. They did not propose to spring the thing hurriedly, but certain legislation was necessary in order to consummate the scheme, and there should not be any delay.

MR. PARKER described at length the local facilities at Halifax, which were such as to meet the desires of the Society.

MR. BLANCHARD said he had listened attentively to all that had been said. He was of the opinion that the provincial and county exhibitions in the Province had been a failure in the past, and thought the Exhibition should be held in the place where it will attract the most people; where the exhibits will be seen by the most people. If the proposed Exhibition is to be managed by the farmers, or by this Association, then we have the assurance that the farmers will be represented, and that we could rest assured that the interests of the farmers will be conserved.

MR. BAKER said he reiterated what Mr. Innes said. He said he was not going to vote for the Exhibition in Halifax until it was thrashed out by the farming community.

MR. SIMS said he had the honor to represent the County of Yarmouth. He claimed that they had in Yarmouth the largest

agricultural society in the province of Nova Scotia, representing some five hundred members. He maintained that this measure should be deferred until they had an opportunity of laying the matter before the different agricultural societies. He would not feel right in going back to his Society without saying that he put his foot down against this resolution. He claimed that two divisional exhibitions would come within the reach of more farmers than the provincial exhibition to be held in Halifax. He thought the Convention should move slowly in this matter.

MR. HARRIS (Pictou Co.) said he must put his foot down, too, against the exhibition in Halifax. They were not prepared to discuss this question. They were asked to give their decision in respect to an Eastern and Western Exhibition. They did that. He said he agreed with the last speaker. It is the young men we want to bring to the exhibitions to interest them in agriculture.

J. RUFUS STARR said that the exhibition in Halifax had had its drawbacks—one of the principal ones was the railway accommodation at Richmond, and the long distance the stock had to be taken for water.

MR. LAURENCE—The City Council has agreed to extend the water system to the grounds.

JOHN STARR—I have listened to the remarks of all the gentlemen who have spoken, and I believe this resolution is in the right direction.

O. CHASE said he was a member of a firm that took the largest number of prizes away from the last exhibition in Halifax, and he was not aware that they had any cattle there that did not belong to them. He was of the opinion that Halifax was the best place for the exhibition. They could advertise their stock much better there. He had sold three animals at the last exhibition to go to Cape Breton.

R. EATON said he agreed with Mr. Chase's remarks—that it was one of the principal features of an exhibition to advertise the

produce and give the people a chance to show and sell their goods.

ALDERMAN LANE—Mr. Chairman and gentlemen, we appreciate fully all that you have said here to-day with respect to the exhibitions held in Halifax in the past, and we are sensible of the fact that they have not been conducted satisfactorily both to the city, and certainly to the county, as we would have liked them. There is no doubt that the Commission that had them in hand did the best they could under the circumstances, but I need not tell you that they were handicapped by the grounds, and had no railway facilities. If we have a new exhibition, it will be put on a different footing. There is no doubt that it is going to cost the city of Halifax a lot of money, but I trust it will be a benefit to Halifax. I say that if we follow the lines marked out by your representatives, it will be a success. We want modern exhibition grounds. We have already told you that we are prepared to go in and give you them as far as we are able. We have gone so far as to select the grounds, and we are assured that you will have all the railway facilities that you require. We want this Farmers' Association now to place itself on record if it wants this exhibition held in Halifax. If we hold a good exhibition it will create a taste for that sort of thing. They are having better and larger exhibitions now in the large cities of Upper Canada than they have ever had before. We want you to say whether you want it to come to Halifax, and if you decide to come we will do all we can to make an exhibition that the Province of Nova Scotia will be proud of.

MR. LAURENCE said that the delegates had apparently come to the Convention with cast-iron rules. He thought they should vote according to their own judgment.

COLONEL SPURR said that Mr. Elderkin expressed his sentiments. He thought that Halifax was the proper place, and that as long as the farmers managed it they need have no fear.

MR. C. G. GODFREY (Yarmouth Co.) said that, believing as I do that a large number is not represented from the western part of the province, I would like to offer the following amendment :

"*Whereas*,—If any action is taken at the present time regarding the proposed annual provincial exhibition at Halifax, it would be hasty and inopportune; and *whereas*, it would be advisable to obtain an expression of opinion regarding said proposal from all the agricultural societies in the province;

"*Therefore resolved*—That in the opinion of this Association it is advisable to defer any action on the proposal of the Executive regarding an annual provincial exhibition at Halifax till the next annual meeting of the Association."

Seconded by F. R. Trotter, Antigonish.

MR. STAIRS said if it was held in Halifax on the lines of the Buffalo and Toronto exhibitions, it would be a success.

After further discussion the amendment was put and lost, and the resolution, being put, was carried unanimously, Mr. Munroe being the only dissenting one against it.

Meeting adjourned for dinner.

AFTERNOON SESSION, JAN. 22ND.

Meeting opened at 2 o'clock.

The President called on Major Wm. Clark, who addressed the Association on

COLD STORAGE.

MAJOR WILLIAM CLARK, DARTMOUTH.

Mr. Chairman and Gentlemen of the Farmers' Association:—

I had the pleasure some little time ago of meeting your Executive in Halifax, when they were there to consider other business. As we had been ventilating the question of cold storage as applicable to the development of your farming industry, we thought it would be well to interview your Executive while there, and have a talk over the various matters in connection therewith. Your Executive were glad to meet a few of us who were interested in the subject, and the result was, to me, a very pleasant and profitable

evening, and I think to your office-bearers as well. Your Executive after that meeting, determined to memorialize the Government on the cold storage question, being convinced that if such facilities could be had in the port of Halifax, it would have the effect of giving an impetus in the export of your perishable food products. I have only recently returned from England, where I went to investigate the matter, and to obtain the very latest data in reference to the construction of cold storage warehouses; our idea being, if we were fortunate enough to secure accommodation in the port of Halifax, to establish such a plant as the Province of Nova Scotia would feel justly proud of. I need not trouble you with the details of the buildings and plant to be adopted. You will find that there will be nothing on this continent so effective in all its workings as the installation we will put up. The methods now adopted for preserving perishable food products, such as circulation of brine, etc., around the room will be done away with, with all its disadvantages. The principle which will be adopted will be that of dry air circulation; the air will be manufactured outside of the storage chambers, and circulated and returned purified, so that you will have all the freshness of a well ventilated room.

I think it may be quite in place to say that this is a subject that has had my attention for quite a number of years, and always in connection with the development of the resources of the Dominion of Canada. Last year I came to the city of Halifax to find out whether the conditions existed in the Province of Nova Scotia for such an establishment for advancing the farming interests as well as those of the fisheries. I have been studying the question and have also taken counsel in the matter, and myself and friends have come to the conclusion, that probably nowhere on the face of the earth at the present time is there a place that will be so much benefited by the inauguration of a cold storage system, as this section of the Dominion known as the Maritime Provinces. You have here everything that goes to make a cold storage system a success, although your resources are not devel-

oped to the extent to which they ought to be, and I know perfectly well that while you have all the advantages of soil and climate, and everything that man would consider desirable for the prosecution of the agricultural industry, you have been largely up to the present simply catering to the local needs—whenever you came to this boundary line your ambition ended—because you could not become exporters unless you had facilities to carry perishable products to the market where they are most in demand. The subject of cold storage is not a new one. It has been a proved success with our sister colonies of Australasia for the last 15 years; they have been having their products sent to the British markets over 13,000 miles of water, thereby developing their resources hand over hand. We in Canada have been resting under the old order of things when we have every advantage which Australasia possesses, and when we are within only a few days journey of the British Markets. Now it is very evident to all who have given any study to the question, that were the facilities which enable the Australasian farmers to send their mutton and their fruit and their dairy products to the British Markets, extended to the Dominion of Canada, immediately the farmers of this province would begin to take higher ground, and produce not only what was wanted in the local markets, but what was also in practically unlimited demand for export.

In looking at the thing as a practical business proposition, we will keep in mind what is a well known fact, that you are able to produce here in this province, in point of qualities, products which will challenge comparison anywhere. I am not prepared to say that everything you produce is first class—that is largely a question with the individual producer—but in isolated cases you can produce what is equal to anything in the world.

It has been said that we have nothing to export, we do not raise enough for our own wants! Will the fruit growers admit this, and what have the fishermen to say on this subject? The Dominion of Canada does produce \$500,000,000 worth of agricul-

tural products, and the province of Ontario is not to blame if Halifax butchers buy Ontario fed beef.

The Province of Nova Scotia can produce an enormously greater amount of produce than her population can consume, and there is no portion of the Dominion that can excel her in the variety or excellence of the different kinds of produce known as perishable food products, which are notoriously the most profitable for the farmer to raise, be he great or small.

Look at our cultivated fruits of the different kinds, look at our small fruits, our wild fruits, and ask yourselves what might be done under a Cold Storage system, which would enable every package to be marketed at paying prices and without waste or deterioration.

Glance at the possibilities connected with poultry raising. Under Cold Storage there is an unlimited demand at all seasons of the year, and this demand can be absolutely regulated. Nova Scotia presents a perfect field for the extension of this industry. It can be made a means of revenue to rich and poor, and no branch of farming industry, under intelligent care, will give quicker or better returns.

BUTTER AND CHEESE.—Under Cold Storage the market can be regulated, and the highest prices both in the home and export market secured. Without Cold Storage we cannot maintain our position in the European markets. Our Australasian cousins, who are just as able as we are, had, according to the circular of the London Docks Committee, twenty steamers fitted for carrying Dairy Produce due to arrive in England from Australia and New Zealand from the 1st to the 31st of January in this year.

Coming to the question of Butcher Meat of all kinds, Beef, Mutton and Pork, the statistics connected with the development in these branches in the Colonies, the United States, Argentine and elsewhere under refrigerator facilities, are almost beyond comprehension, and what the Colonies and countries have done Nova Scotia can do in degree, provided the province is prepared to

waken up from the lethargy of years and work out destiny by up to date methods. Selling hay is only a suicidal policy. Every ton of hay to spare from the marsh should be fed to stock on upland farms, and the manurial value returned to the soil. Large areas now capable of raising sheep should be covered with flocks, and the products of our fields and the by products of our dairies should be turned to account in hog raising.

Under an abattoir or slaughter house system, which will be the rational outcome of Cold Storage, the live stock can be slaughtered and cared for by modern methods, so that the best parts of the carcass can obtain a ready sale at best prices, while the skins and offal would give rise to many important subsidiary industries, giving employment to many workers.

The agent general of the small colony of New Zealand, with a population equal to about that of Nova Scotia and New Brunswick combined, says:—"With the development of the frozen meat trade, sheep farming has undergone a radical change. Since 1882, the inaugural year, farming has assumed a new phase, sheep raising for mutton being now the most profitable branch of farm management. Sheep have risen 100% in value; small or large flocks of pure or cross bred stock are now kept on all farms which are suitable for them, the object being the production of early lambs for freezing, which sell readily at ten shillings and sixpence (\$2.50) to twelve shillings or about \$3.00 each."

The shipments from New Zealand in 1882, the first year of Cold Storage facilities, were 1,707,328 lbs. In 1893 these had increased to 100,262,453 lbs. or about 100 times more than that of 1882. The official year book 1895 says:—"It is found according to statistical returns the number of sheep on the Island reached 20,230,829. There are 21 freezing works in the colony, with a freezing capacity of 3,665,000 per annum."

The Stock Yards of Chicago were erected in 1895 with a capacity for the modest number of 5000 cattle and 30,000 pigs.

In 1892 there passed through the yards 5,571,796 cattle, 197,576 calves, 7,714,435 pigs and 2,145,079 sheep. There are 140 commission firms and about 100 firms doing packing and other business 20 of whom are meat curers. To show the magnitude of the chilled meat trade, Swift & Co. use over 3,000 refrigerator cars, and Armour & Co. 2,250.

What increase in live stock has taken place in Nova Scotia since 1856 or 1882? (Applause.)

MR. TROTTER then moved the following resolution:—

"That this meeting, having listened to the discussion on cold storage as an aid to the development of the agricultural resources of Nova Scotia, unanimously endorse and confirm the action of the Executive in having presented to the government a memorial urging the extreme desirability of public aid towards securing the early establishment of a cold storage depot for the better handling of perishable food products of this province; and it is further resolved, that a copy of this resolution be forwarded to the Hon. Provincial Secretary."

JOHN McDONALD seconded the resolution.

GEORGE E. BOAK said he was very glad to have the opportunity of addressing the convention upon the subject of cold storage—that Major Clarke who preceded him had been a practical farmer in Scotland, and when he said that it took four years to make a steer to put on the market he knew what he was talking about; that he (Mr. Boak) was not a farmer, but was interested in the installation of a cold storage plant at the City of Halifax, and that if such a plant were adopted they would make money by it. He said it was very fortunate for the Province that he had met Major Clarke about six months ago and became interested in the matter of cold storage—because being a stranger in the city he might have remained months longer, and might have met many people who would not have taken any interest in the matter. Since I have been in business my object has been to endeavour to develop the resources of our country. Some eight years ago his brother

had discovered that Norway was shipping immense quantities of foxberries to the Chicago market ; that they had investigated the matter, and during the last five or six years some five thousand barrels yearly have been shipped from the port of Halifax to that market, bringing in from \$25,000 to \$40,000 annually. When we first took hold of this matter and talked it over with some enterprising merchants in Halifax, we found that it took a long time to get our capitalists interested, and we thought that if ever there was a time that an enterprise should receive government aid it was now, because it was furthering one of the greatest industries of the province, that is, the farming industry. Of course we could not get any positive answer from the government, but we were told to keep on, and we have come here to-day to ask the support of your Association.

We were asked what we knew about the business. I knew very little, but as my friend Major Clarke here has made a study of it for some years, and was better able to speak on the matter, I thought it would be well to get some expert ideas. Major Clarke proceeded to England and consulted Joseph Price, one of the best consulting engineers in London, who is a specialist on cold storage.

(Mr. Boak read a few extracts from his report.)

Gentlemen, I think it is deplorable that we have been so long in bringing this matter before the people of this country, but I feel assured we are on the right track. There is no doubt that the development of cold storage has made wonderful strides even on this continent. Take for instance Chicago with its large beef centre—it has been proved beyond all question that the success that has been largely attained by that beef centre has been due to the superior system of cold storage which is at present in operation in that city.

I wish to state one or two facts to show you that cold storage or refrigeration is not an experiment. The London market is sup-

plied with salmon from British Columbia. These fish are sent via Australia to that market, crossing the equator twice. With the C. P. R. now in existence, and with a fast line of steamers running from Halifax, salmon could be shipped via Halifax and delivered at the port of Liverpool in first class condition. The proof we have that cold storage is not in an experimental stage, salmon is shipped from British Columbia via Australia and from Australia to Liverpool, thus crossing the equator twice, and reaching the English market in perfect condition. I think that in itself will prove that so far as keeping is concerned by cold storage or refrigeration properly installed is by no means an experiment. The P. E. Island cheese makers have sent a large quantity of cheese to Montreal to be placed in cold storage, and to be shipped from there the very first favourable opportunity. There is no reason why that business should go past the port of Halifax.

I would say here in closing that we are obliged to you for introducing the resolution in approval of the action of your executive. I am not here in the position of a missionary, and am not going to ask you to take up a collection. When our enterprise is placed on the market it is our intention to distribute the interest of the company through the province, and we are going to try and get the farmers to take an interest in it and help to make it a success. The security will be the best. We are asking the government to give us 4% guarantee for four years on \$100,000 of stock. We do not get the money unless we can show that we have earned that much for the shareholders. (Applause).

HON. MR. LEBLANC, in a lengthy speech, set forth the benefits to be derived from a system of Cold Storage.

MR. J. H. HUGILL (Agent of the Furness Withy Co.), said: "Mr. Chairman and Gentlemen.—I have listened with great pleasure to the remarks of Major Clarke and Mr. Geo. Boak. A short time ago I attended a meeting at Halifax in respect to Cold Storage, and the question was put to me—Supposing a Cold Storage

plant is established at Halifax, will you establish a cold storage system on your steamers? I have no hesitation in saying that we will do so. I am here to-day to say that when this system is in thorough working order, we are quite prepared to put up sufficient accommodation to carry forward your exportations to London.

This is a matter I would like to see carried through. It will be profitable to us, and more so to the agriculturists of this Province. We will have much pleasure in assuring you that we will afford you all reasonable accommodation, as soon as we see that we have a reasonable thing to start with. (Applause.)

MAJOR CLARKE said :—At the present time if a producer had an animal in stock in perfect condition, fit for market, and he had no purchaser, he had to go on keeping the animal in condition until he could find a buyer. Under a cold storage system the stock could be sent to a foreign market at once, without any delay.

PROFESSOR CRAIG said he had to express the regrets of Professor Robertson, who was not able to be present owing to official engagements. He was glad to hear this Cold Storage matter discussed; it was a question that had been interesting him for the last few years. In order to get some official information he had been co-operating with a cold storage Co. in Montreal, with a view to obtaining information for fruit growers. He said he was very glad to hear the question discussed from all the different standpoints, as it had been at that meeting. He was of the opinion that there were certain practical questions which underlie the success of the whole scheme—the effect of cold storage upon fruit, and the possibility of selling that fruit out of season. Whether they could be carried to Liverpool or London, and afterwards sold in good condition—(he referred more particularly to the more perishable products) he said he did not think that these were questions they should take off-hand and accept without further trial. He had done some experimental work in the case of Bartlett pears. He had them put in cold storage the 1st of Sept., and when put on the market in good condition, well colored

about December, they could not be sold in Montreal. He could not get a bid for them. They had been put up in nice cases, and were wrapped in tissue paper. He thought that in handling those perishable products they would have to make a market for them.

Another side of the question, and which was a very important one, was in respect to exporting beef and mutton to the British market by means of cold storage. He had made strong recommendations to the Federal Government in respect to having a series of experiments made in reference to placing fruit on that market. It was necessary to find out the different effects of cold upon individual fruits. It was hoped that next year several trial shipments of fruit would be made to the different ports of England, with a view to demonstrating to the people an important industry which will bring wealth to the people of this country. From his experience in Montreal, a personal friend of his had erected a cold storage warehouse in that city, and under a good deal of disadvantage and many difficulties, he was most successful for the first year. The second year he was unable to enlarge his premises, and last year he had added a plant worth \$300,000 to the original buildings and plant which had been put up; so that they could see that apart from every other consideration it was a paying business. It is a business which would be intimately connected with the agriculture of this province, and was well worth the support of the farmer and the fruit grower, especially in this province down by the sea, where the people were such a great distance from the English market. The government had experimented with cheese in P. E. I., and a large quantity had been sent to Montreal to be placed in cold storage until the market should improve.

MR. BLANCHARD.—Was the fruit placed in cold storage really as good as it appeared to be?

PROF. CRAIG.—The pears were not as good quality when taken out as when put in. They were in a good condition to sell, but they would not keep as long as in the first instance. The process

of decay, which is the process of ripening, goes on more rapidly after taken out of cold storage, than if allowed to take the natural course.

MR. BLANCHARD—Were the pears put in before they matured?

PROF. CRAIG—They were pulled before fully grown, and before they were colored. When two or three days out of cold storage they began to take color. They had been in cold storage at a temperature of 34°.

MAJOR CLARKE said he thought 34° was too much of a cold bath for fruit.

PROF. CRAIG said these pears were picked about a week and put in moderate storage before being shipped to Montreal. They were then packed and shipped by express to Montreal and then left in a room with a medium temperature.

MAJOR CLARKE—These pears were plucked at Grimsbury; were they despatched to Montreal in an insulated car, or did they go by an ordinary express car?

PROF. CRAIG—By ordinary express freight. They were in a cellar at Grimsbury a few days.

MAJOR CLARKE said that if they had been sent forward in insulated cars they might have turned out better. He said it was a drawback after the fruit was pulled, to send them forward at a high temperature to be placed in cold storage.

PROF. CRAIG said he would like to say a few words about a trial shipment of fruit which failed during the last season. The fruit growers of Ontario knew that the government were assisting the butter trade, and they asked the government to do the same for the fruit industry. Certain parts of steamers had been fitted up for the purpose of the butter trade, and the government said they would allow one of the compartments for some trial shipments.

I was asked to take charge of the shipments, which I did.

I went to the Niagara district and collected a variety of fruit in the best possible condition, and packed it carefully. I had separate packages made for each kind, and I shipped a consignment to Montreal in refrigerator cars. The temperature was too high when they reached Montreal, and it was against my best judgment to put it on the steamer, but I had no authority to do otherwise, and it reached Liverpool in bad condition. The peaches, pears and plums were largely reduced to pulp. The apples, tomatoes and grapes arrived in better order, and considering their condition sold at a very fair rate. The compartments in the steamer had been constructed for butter, and it was tightly insulated, there being no ventilation whatever. Artificial heating took place, and it arrived there in bad condition. It left our experimental work in a bad state, and for that reason the government is now considering the desirability of continuing this work to such times as we can say it will be done with success or non-success. I have not the least doubt that three or four shipments will demonstrate the possibility of placing our fruits on the British market in good condition. (Applause).

S. S. NAYLOR asked how it was that the French can place their fruits in England in good condition. The French are able to preserve their pears; why cannot the Canadians do the same?

PROF. CRAIG—There are certain varieties of pears that will keep. In the first place they have good keeping quality of pears, and in the second place they have the very best cold storage system to keep them in.

MR. HUGILL spoke of some Tasmanian apples that had been in cold storage since last May; which he had eaten recently, and which had been kept in very fine condition for table use.

After some further discussion the resolution was put to the meeting and passed unanimously.

PETER INNES moved the following resolution:—

“That this Association respectfully ask the government to

appoint a public analyst at Halifax, who for a small fee will promptly analyse and report on samples of artificial fertilizers sent him by farmers, and enact that penalties be imposed on manufacturers who fail to come up to their guaranteed standard."

He said it was very desirable that the people should for a small fee be able to have their fertilizers, etc., analyzed, and learn what they are composed of. We are under a great disadvantage in this respect. He had purchased fish fertilizer made by E. R. Oates, of Digby. That fertilizer was selling for \$40 a ton. It cost him (Mr. Innes) \$36 a ton. He had sent a sample to Ottawa to be analysed, and two years after he had got returns stating that this fertilizer was worth \$12 a ton.

COLONEL SPURR seconded the resolution.

The resolution passed unanimously.

MR. MOORE moved the following resolution:—

"Whereas, it has come to the knowledge of this Association that the action of the local legislature of Nova Scotia in passing an act offering a bonus of \$400, under certain conditions, to any individual or company starting a creamery for the manufacture of butter and cheese, has had the effect of bringing into existence some twenty or more creameries, most of which manufacture cheese which had to be disposed of in the local market to the detriment of all the cheese factories in existence before this act was passed, all of which were started by private enterprise and without government aid:

"Be it therefore resolved, that this Association after due discussion recommend to the legislature that compensation in some shape, or at least half the amount given to the creameries, be given these pioneers of the cheese business in Nova Scotia."

ED. HARRIS seconded the motion.

MR. BLANCHARD said it was a difficult matter to deal with. It was a question that could scarcely be answered without consideration. It seemed to him that the methods adopted by the government had been injurious to the pioneers in the manufacture of cheese and butter. In the Island of Cape Breton, where there

was a cheese factory in successful operation, it has been closed down. He thought there would be no harm in commending the matter to the consideration of the government, who he thought would deal equitably towards the parties concerned.

After some discussion, which was participated in by Messrs. Rand, Harris, Parker, and Donaldson, the matter was laid over until the next meeting.

J. E. HOPKINS said that the discussion which they had heard on the development of the resources of this province, has been very important. He said it was very essential that the farmers of this province should have a better class of cows than they have at the present time. He advocated the importation of better cows, as by having a good quality of stock it would meet with very beneficial results in the dairy, and in every other respect.

W. S. BLAIR said he was very much pleased to be present with them on that occasion, to hear the discussions on the different subjects which were of so much interest to the farmers. The subjects of Exhibitions and Cold Storage were of much importance, and he was very glad to see them discussed, and to see that the farmers grasped their importance. He spoke at some length upon the necessity of the farmers to properly cultivate the soil—that apparently a great many farmers relied almost exclusively on the chemical make up. He advocated proper cultivation.

W. NEWCOMBE said it was no use to try to raise sheep with so many dogs at large. That apparently the farmers throughout the province had no protection from dogs. He thought a law should be framed that would give the farmers some protection in this respect.

He moved a resolution to have a stringent law passed for the prevention of this nuisance.

MR. RAND asked if there was any market for dogs in London. He was told that there was a man down the street had twenty of them.

JOHN McDONALD said that at the last provincial exhibition there were more prizes awarded for dogs than for all the dairy cows of Nova Scotia.

J. E. STARR said that the owners of dogs should pay a tax into the County Treasury; that all dogs should be registered, and that the owners should provide collars for them.

PETER INNES asked who would collect the tax?

J. E. STARR.—The County Official.

E. L. COLLINS advocated the law of Massachusetts—make the man who owns a dog pay for the sheep he kills.

MR. BLANCHARD moved that the matter be left in the hands of the executive to get legislation passed on the subject. The motion was duly seconded, and passed unanimously.

The Secretary moved a vote of thanks to the ladies and gentlemen who so kindly furnished the music at last night's session.

MR. LAURENCE seconded the motion. Passed unanimously.

The Convention adjourned.

PAUL C. BLACK,
SECRETARY.

SPECIAL SUMMER MEETING

-- OF THE --

NOVA SCOTIA FARMERS' ASSOCIATION,

Held at Mabou, C. B., June 30th, 1896.

Meeting called to order shortly after 2 p. m., President, J. B. McKay, in the chair.

The President opened the session with a short but interesting address.

W. SAKBY BLAIR was called upon to address the meeting on Soil Moisture. He said: In looking at the farm lands around this district, I have thought that a few remarks on the conservation of soil moisture would be most appropriate to an audience here this afternoon.

The practice of irrigation has received a great deal of attention in many places, and has been applied with marked results. I call to mind one instance where an experiment was conducted with an acre of strawberries, one half of which was irrigated, while the other half was left to depend on the natural source of moisture, with the result that while the unirrigated portion produced only an ordinary crop of fruit, the yield of berries on the irrigated half was wonderfully increased.

By conserving the soil moisture we get large crops. The speaker here spoke of the enormous drafts made by various crops

on the moisture in the land. By charts he illustrated the great importance of having the soil in a finely pulverized condition, and by this means increasing the amount of surface containing soil moisture. Soil particles are surrounded by a water film, and are, when in a proper state of cultivation, separated by air spaces.

How to conserve the moisture in the soil. First, by plowing. This should be well done, as any uneven surface in the soil will cause evaporation. By charts it was shown that uncultivated land suffers a much greater loss of moisture by evaporation than does land which is cultivated. Early plowing prevents loss of moisture, but by early plowing it is not meant that you should plow before the land is dry. Be careful not to puddle your soils by working the land when too wet.

The disc harrow is a very valuable implement with which to conserve the soil moisture.

In cultivating a growing crop, shallow working will prevent the undue escape of moisture, and acts as a mulch, and conserves the fall and winter rains. Cultivate as soon as possible after a rain, and thus prevent evaporation.

The object of drainage is to remove the surplus water, that is, all water in the land in excess of the water film around the soil particles.

MR. CAMERON—What about fall plowing?

W. S. BLAIR—Two-thirds more of soil moisture is retained by plowing land in the fall. Land in grass parts with its moisture more readily than that which is lying fallow.

MR. LEBLANC—What advantage is there in manuring in the fall, to conserve the moisture?

W. S. BLAIR—Not much; a slight loss if anything.

MR. CORNING—Would you advocate a level surface?

W. S. BLAIR—Yes. For this reason it pays to have a good plowman, one who can do smooth work; because, as has

been already pointed out, an uneven surface suffers a greater loss of soil moisture.

A FARMER—How many inches of pulverized soil would you leave as a mulch?

W. S. BLAIR—About three inches.

D. MCG JOHNSON—What about the depth of plowing?

W. S. BLAIR—Do not plow too deep.

The President, after referring to the valuable services of Col. Blair to the Maritime Provinces, both as a practical farmer in the field, and as a superintendent of the Experimental Farm at Napan, called on that gentleman to address the meeting.

COL. BLAIR expressed his pleasure at being present at this meeting of Cape Breton farmers, particularly such an intelligent class of farmers as he took those present to be, from what he had seen of the surrounding district. We can judge of the character of the people by the appearance of the farm and farm buildings. He had been most agreeably impressed with what he had seen of the country.

He wished to make a few remarks on the sources of fertility. The methods of farming in this province are most wasteful in the care of farm-yard manure. On the majority of farms the liquid manure is largely lost, and it must be borne in mind that the liquid is by far the most valuable part of the manure.

Another important thing is the prompt cultivation of our land. Don't waste fertility by delaying the timely cultivation of the soil. Keep the soil particles all the time separated, so that the air may freely circulate through the soil.

Nothing can take the place of *good* farm-yard manure. The mechanical action of this manure, as well as its chemical effect, is a valuable feature.

It is possible to apply too great a dressing of manure, *i. e.* more than is necessary for the sustenance of the growing crops.

As to depth of plowing, while it is true that shallow plowing will better conserve the moisture in the soil, yet, deep plowing is on the whole preferable, but don't plow too deep all at once. The cold subsoil requires a long time to make its plant food available for growing crops. Better to use a subsoil plow, and thus admit the beneficial influence of the air.

All plant food must be soluble, and thus all land must be made fine and in good tilth if we are to expect good crops; so, also, manure must be made fine, and easily available to the delicate plant rootlets.

Sow clover. It acts as a subsoiler. No matter if it does only last one year. It has done its work, and the decayed roots, which penetrate deeply into the soil act as subsoilers, beside furnishing a large amount of plant food. All leguminous crops, as clover, peas and beans, fulfil this mission, therefore it pays to grow them. The common thistle is a good subsoiler. Under-drain your land, and thus facilitate the action of these plants. In a compact subsoil, it will probably take a long time—perhaps five years—before the full value of underdraining is apparent. The idea that drains must be put down below post is preposterous. Two feet is enough. Drained land requires less labor to fit it. One horse can, on drained land, do the work of two on that which is undrained.

A good seed bed is absolutely necessary, and when it is provided, less seed is necessary.

When sowing grain, use a drill by all means. In broadcasting, some grains are covered three inches deep, while others are nearly on the surface, and the consequence is a very uneven stand of grain. By drilling, all the grains are at the same depth, are covered alike, and all have the same chance of sunlight.

Some people criticise the work done at the farm at Nappan, and say "that any farmer could do as well if he only had the government at his back." But I wish to say here that the results

achieved at Nappan have been by methods available to any farmer in this country.

The selection of seed grain is also important. By care in selecting the best and plumpest heads in a field, a farmer can soon obtain a supply of the very best seed.

By chart, Col. Blair showed the increase in yield of different grains at Nappan over the average yield for Nova Scotia and Ontario. We, in this province, should stop importing so much grain. We should look at this subject from every standpoint. For example, in case of war with the United States, that country could easily shut off our wheat supply from the North-West, and therefore we should raise our own food supplies.

By chart, Col. Blair showed the amount of money which could be realized by an increase of even one bushel of grain per acre in Canada, and if the Experimental Farm can teach the farmers to raise even one bushel more per acre, it will result in a gain of three millions of dollars to the Dominion, as a return for \$75,000 expenditure for the maintenance of these experimental farms.

The speaker mentioned an experiment conducted at Nappan with a five acre field of roots. Part of this field was manured at the rate of ten loads per acre, part at the rate of twenty loads, and the remainder at the rate of thirty and forty loads. That part manured with forty loads gave only seven bushels more of roots per acre than were grown on the part receiving but ten loads per acre, and in the succeeding grain crop, no greater difference was noted. This shows the advantage of cultivation.

A FARMER—Please speak of the use of lime on land.

COL. BLAIR—Lime has more of a mechanical effect than any other. It helps to sweeten the soil, and breaks up lumps.

In speaking of the cultivation of roots and ensilage corn, Col. Blair said that while the farmer should aim to raise as large

a crop per acre as possible, it was not so much quantity as quality which was desirable.

He spoke of the three stages of growth of the corn crop. First tasseling, second silking, and third glazing. One ton of corn in the last stage is worth two of that in the first.

D. MCG. JOHNSON moved the following resolution, which was seconded, and carried unanimously by a standing vote :—

“The Farmers’ Association of Nova Scotia, now assembled in session, regret to learn that we have lost the services of Colonel Blair as Superintendent of the Experimental Farm at Nappan.

“We are fully alive to the great interest he has ever manifested in the welfare and improvement of agriculture, and in the education and elevation of the farmers of these Maritime Provinces, ever since he entered public life.

“We desire thus publicly to acknowledge his great services to the farmers of these provinces, and to congratulate him upon the success he has made of the Experimental Farm, which has been in his charge during the past eight years ;

“*Therefore be it resolved*,—That we consider the agriculturists of these Maritime Provinces have sustained a severe loss in the retirement of Col. Blair from the position of Superintendent of the Experimental Farm at Nappan, and we hope that matters may be so adjusted that his services may be continued in our agricultural interests.”

COL. BLAIR, after being presented with this resolution, was almost overcome by his emotion, and for a short time was unable to reply, but he finally thanked the Association for the kindly expression as contained in this resolution.

EVENING SESSION, June 30th, 1896.

President McKay called on W. McK. McDonald to read a paper on “The Management of Manure in Winter.”

MANAGEMENT OF MANURE IN WINTER.

W. McK. McDONALD.

The saving of manure in winter so as to have it in the best possible condition in the spring, should be the business of every farmer. Much may be lost by bad or careless management of it during this season, and I think I am safe in saying that a large percentage of our farmers are unsuccessful simply because they have never given this important subject a moment's consideration. It is upon farm-yard manure that the farmers of this country must principally rely for maintaining and restoring the fertility of his soil. Farm-yard manure contains all the most valuable elements of plant food; no other manure benefits the soil so much, both chemically and mechanically, nor can any other be applied to all sorts of land with such positive certainty of beneficial action. Crops cannot be grown without it, even on new land after a few years of cultivation. But, before the manure can become useful for the crops and contribute food for them, it requires to undergo an important change. It must be decomposed before it can afford food for plants, and if it remains through the winter unchanged, it requires considerable time to become fitted for use, and this time is the very period when it is most wanted for the early growth of the crops. A plant starved in its early growth is lost beyond recovery, and one prevalent cause of poor crops is that the young plants are starved for the want of food when they want it the most. As soon as the roots have made some growth they can take care of themselves, having room to forage in; but at first the tender plant needs food within the reach of the smallest roots to support it in its helpless stage. As with an infant animal, which cannot live on the solid food that supports it afterwards when its digestive power is developed, and must be provided with its mother's milk until it is able to take less digestible food, so the young plant needs the most digestible food to carry it over its early life and prepare it for the use of coarser nutriment. Consequently the

care of the farmer should be given to his manure, that it may be fermenting and decomposing into soluble matter upon which the young plants can feed from the first, when the first tender rootlets start from the seed and seek their proper food.

For want of this prepared nourishment a large portion of the crops are lost in their first stages of growth, and grass seeding especially fails on this account.

Manure is in the most favorable condition for this change as soon as it is made. Its moisture and the abundance of carbon in it reach upon each other and quickly produce fermentation and heat, which break up its elements: carbonic acid is formed and moisture escapes from it. The matter of the manure consists mostly of carbon and water combined, and this combination is broken up by the fermentation and heat is produced, just as the carbon of fuel is broken up and changed to carbonic acid with the production of heat in a fire. The other elements of plant food, the nitrogen and phosphoric acid and potash, are then released from their combinations with the substances of the manure and are separated and form soluble combination upon which plants can feed. Ammonia, the pungent gas which escapes from the decomposing manure in stables in warm weather, is thus formed and becomes the most valuable element of plant food in the decomposed manure. Hence the manure should not be permitted to freeze, but should be kept warm and fermenting that these necessary foods for the plants may be produced. Moreover, there is much loss occasioned by the exposure to rains which wash out the most valuable parts of the manure when it is scattered loosely in yards and exposed to the weather. The dark liquid which drains from manure thus exposed in yards is truly a golden stream, richer in gold, or what will procure it, than many a gold mine of equal extent, and one cause of poor crops, exhausted soil, and poverty among farmers, is the waste thus caused. One ton of good manure is able to return two or three dollars worth of crops, but after exposure in the way mentioned one half of this

value is lost. This is equal to \$15 on every ten loads of manure, or \$150 on every 100 loads; a very serious loss to the farmer, indeed. The manure should be gathered, as it is made, into compact heaps, and never suffered to spread over a yard. The heap should have a hollow top to catch the rain or snow, which affords moisture to keep up fermentation, and, by replacing that which escapes from it in the form of steam or vapor, makes up for this loss and prevents dry rot, which is the worst injury that can happen.

It is an excellent thing to have a quantity of dried swamp muck to mix with the manure or to use as absorbents of the liquid, which is the richest in ammonia and the most valuable part of the manure, for this moderates the heat of the fermentation and preserves it and absorbs whatever ammonia may be found, and, being itself as valuable as the manure, it doubles the supply. In this paper I have endeavored to throw out a few hints as respecting the successful management of manure, and I seize upon this opportunity to impress upon our farmers the necessity of giving this subject their serious attention. It is a fact that the leaching or the washing out of the soluble parts of the manure heaps by rain or other water impairs its value sometimes to the extent of fifty per cent. In view, therefore, of these facts, I think it is high time that we farmers should turn over a new leaf and make every effort in our power to prevent this woful waste. If we do this it will be a step in the right direction, will hasten an era of prosperity that we never dreamed of, and will greatly help in making our farms what they ought to be—our joy and pride, and admiration of all who see them.

As the time was limited, no discussion was held on this paper.

W. W. HUBBARD, editor of the *Co-operative Farmer*, Sussex, N. B., next addressed the meeting on "Marketing Farm Crops Through the Dairy Cow."

The speaker began his remarks by calling attention to the special adaptability of Nova Scotia, and the Maritime Provinces

generally, to dairying. In view of the prevalent low prices for butter and cheese, some may say that this branch of farming has been somewhat overdone. But the present depression of prices is true of nearly all lines of business. The man who goes into dairying with pluck and perseverance, determined to make a success of the business, will in the end achieve a good measure of success.

After raising his crops, it is necessary for the farmer to market them in order to get that great desideratum—money. It, therefore, behooves him to study the question of how best to market these crude farm crops. We believe that one of the best means of getting these crops to the consumer is through the medium of the dairy cow.

In dairying we cannot profitably make milk from a beef cow. We must have one of a distinct dairy type. A dairy cow has a much greater nervous development than a beef animal.

Points of a good dairy cow :—Head like a race-horse, thin and bony, with a large brain space ; neck long and thin ; shoulder bone high and sharp ; backbone large and prominent—this gives nerve power ; barrel large, plenty of room for good digestive capacity ; good length from hip-bones to root of tail, which should be long, indicating large spine development ; hair fine and mossy. The udder should be well developed back, and running well forward, and such that after milking it does not altogether collapse. It is a wrong notion that all the milk is contained in the udder at the time of milking. The glands of the udder have the power of making milk during the time of milking.

The foregoing are some of the points of a good dairy cow. Such a cow will not fill the bill as a "hardy" animal. She requires good care, feed and shelter. The farmer, in feeding his cows, should remember that something cannot be got from nothing.

As to stables, there are many varieties in these provinces. Some have too much ventilation. Our cows must be warmly housed if they are to be milked ten months in the year. Six

months' cows are not profitable. Warmth is absolutely necessary, but don't go to the other extreme and make the stable too hot.

Kind treatment has much to do with the profitable keeping of cows. Governor Hoard, of Wisconsin, tried an experiment along this line. After partially milking a cow accustomed to kindness, he suddenly scratched her side with a pin, and after the cow had quieted down again, finished milking her. The milk drawn just before the scratching experiment was tested along with that milked afterwards, with the result that the first was much the richer in butter fat; thus showing that a cow, if ill-used, can, of her own will, withhold the fat in her milk.

Another instance. The milk from a herd of cows on a dry pasture, and worried by flies and heat, tested only one per cent. of fat at night, but when milked next morning, after a cool and restful night, their milk tested three per cent, thus showing a direct loss of two-thirds of the butter fat from bad treatment. Dry pastures and horse-flies should not be regarded as a dispensation of providence. They can be easily remedied by growing green feed and frequently oiling the cows.

Cape Breton is peculiarly adapted to the keeping of cows, in that it has cool nights, good pastures, and plenty of pure water. You can make more milk and better milk here than perhaps they can in the west.

Dogs should never be allowed to drive cows. It is inhuman and unprofitable.

As to breed. There is no *best* breed; but get a dairy breed of cows, and procure the best individuals of the particular breed you fancy.

There has been a wonderful development in the dairy industry in Canada. Last year, 1895, the exports of Canadian cheese amounted to over fifteen million dollars.

In the manufacture of cheese the skill of the cheese-maker is not alone responsible for the quality of the product. The patrons

of a cheese factory have more to do with this in supplying the right kind of milk.

The points necessary to the production of good milk are :—
Clean milking ; aeration of the milk—a simple way is to pour it from one vessel to another with a long-handled dipper. *Thorough straining*. Keep the cream down, as when it has once risen it is hard to incorporate it into the cheese, and causes gassy milk. It is best not to mix night and morning's milk, if possible to avoid it. If your milk is returned sour, don't be offended, but try to prevent it getting so again.

After the cheese factory is closed, butter-making commences. In this the same cleanliness is necessary.

The methods of creaming are :—

1st. Shallow pans. This method is good, but you want a cool room.

2nd. Creamers—deep setting. Set at once after airing. The water should be cold—below 45°. If you haven't a cold spring, use ice. Set 24 hours. The cream should be kept cool until about twelve hours before churning. Just before churning warm it up to from 60 to 70 degrees, according to the season. Cream should be ripened to a slight degree of acidity, but not too acid.

3rd. Separator system. This is simply separating by centrifugal force. The skim-milk, being the heaviest, is thrown to the outside of the separator bowl and escapes by one tube, while the cream runs off by another. The advantages of a separator are more cream and cleaner cream. Study the wants of your customers in color, style of package, etc. etc.

The prospects for dairying in Canada are good. The successful prosecution depends on us as dairymen. We have to compete with the rest of the world in supplying the world's markets.

Mr. Hubbard said that he voiced the sentiments of the farm-

ers of New Brunswick in expressing his regret at the retirement of Col. Blair from the farm at Nappan.

This address was listened to with close attention.

R. W. STARR, of Wolfville, N. S., next addressed the meeting on "Fruit Culture."

The speaker has been interested in Fruit Culture since early life. So far as he has seen here in Cape Breton, where fruit trees are taken care of, there is nothing to prevent successful fruit-growing.

To grow fruit successfully, it is necessary to have a good soil, well drained. Cultivation is as necessary for fruit trees as for a root crop.

The fruit of to-day is an artificial production, like the modern dairy cow.

Different localities have their special kinds of apples, peculiarly adapted to a certain section; for example, the Gravenstein in Kings and Hants Counties, and the Nonpareil in Annapolis County.

When setting out an orchard, select the kinds which have been found to do best in your own neighborhood. The Russian Ironclad varieties are not well adapted to Nova Scotia.

If you find that apples don't pay, try plums, but don't, as I see you do here, allow them to develop the black knot. Steer clear of tree agents who urge you to buy new and untried varieties. The bulletins sent out by the Experimental Farms contain a great deal of information, and are sent free to all who apply for them.

The School of Horticulture at Wolfville offers special inducements to young men who wish to go into this line of farming. The tuition is free.

QUESTION.—"When is the best time to cut out the black knot?"

ANSWER.—"Any time."

QUESTION.—“Will a shallow soil do for an orchard?”

ANSWER.—“Yes, anywhere where forest trees grow well will grow fruit trees.”

COL. BLAIR was next called upon to address the meeting, and continuing his remarks of this afternoon, said :—

The profit of keeping cows depends on the cost of feeding. It is the last half bushel which pays in feeding cows—or steers or horses.

Weed out the poor cows. Test the milk and find out which cows are making your butter, and you will soon have a good herd.

Farming *will* pay, if the same intelligence and vim are put into it as in other professions and lines of business.

Beef-raising can be made to pay as well here in Nova Scotia and Cape Breton as in Ontario. You say beef-raising won't pay. Look at the prices got years ago for butter, tuppence ha'penny and a pound of sugar in payment—and still people kept cows.

Horse-raising will pay also, if we raise the kind that is wanted. Cavalry horses are in demand.

Col. Blair closed his remarks with a few words in appreciation of the reference made at the meeting to his services as late manager of the Experimental Farm at Nappan.

B. W. CHIPMAN, ESQ., Secretary of Agriculture, was called upon, and spoke as follows :—

PRACTICAL TALK TO FARMERS.

B. W. CHIPMAN, SECRETARY FOR AGRICULTURE, HALIFAX.

It affords me a great deal of pleasure to make my first official visit in this part of the province, and yet I assure you it is not without some embarrassment, following, as I do, as Secretary for Agriculture, so eminent a man as the late Professor Lawson. He was an agriculturist by birth, education and practice, and he grew up with, or rather advanced agriculture grew with him, for a period

extending over nearly thirty years. He was a scholar and a gentleman, and all who had the pleasure of his acquaintance knew the value of his agricultural knowledge. If I can, only in a measure, give that general satisfaction, I shall have accomplished much. I have been impressed for a long time with the fact that if this country is to be made a country worth living in, it is by prosecuting her great agricultural pursuits, while we have the advantage of a greater variety of magnificent natural resources than any other province in the Dominion. We have great wealth in our mines and minerals and our forests and fisheries, but our agricultural resources

ARE MORE VALUABLE THAN THEM ALL.

Take the marvellous growth of the fruit industry in the Annapolis Valley, so called, the valley extending between Windsor and Annapolis, a distance of about sixty miles. In passing through that valley a few weeks ago I was struck with the enormously increased cultivation of fruit in the last thirty years, having resided there previous to that time. Then the largest orchards did not cover more than three acres, and few, if any, farmers produced more than 100 barrels for shipping. At the present time numbers of orchards are covering 10, 20, 30, 40, 50 and some as high as 100 acres of ground, and still they are planting. It is not too much to prophesy that the young men of the present generation will see that whole valley a vast orchard of apples, plums and peaches, combined with a large growth and cultivation of all the smaller fruits. It is strange, too, that prices thirty years ago seldom reached more than \$1.50 per barrel for apples, while last season the crop reached nearly one-half a million barrels and the prices realized about double what they did in those days. Now, while the portion of the province to which I refer has made the most rapid strides, what have we done in the other great branches of agriculture, viz., stock-raising and dairying? Thirty years ago the cities of Halifax and St. John, as well as the smaller towns, were supplied with their beef, pork, mutton and poultry by the

farmers of Nova Scotia; to-day a large part of these articles are imported from the other provinces. Surely this is wrong. With our splendid grazing country and soil well calculated to raise all the coarser grains, we should not only supply our own market with beef, mutton and poultry, but we should take a share in the export trade of Canada. England is a large importer of meat and provisions of all kinds. In 1884 Canada exported to Britain 82,217 head of cattle, 121,304 head of sheep, 7,707 cwts. of pork, 254,442 cwts. of bacon, and 50,576 cwts. of ham. In 1895 cattle increased to 96,460 head, and sheep to 215,508 head. All these shipments were from Ontario and Quebec,—not a dollar's worth from Nova Scotia. In 1895 England imported cheese to the value of \$26,000,000. Of this amount the Upper Provinces supplied \$16,000,000 worth, but little or none came from Nova Scotia. In 1895 England imported \$65,000,000 worth of butter, of which only one and a half million dollars worth were shipped from the Upper Provinces and none from Nova Scotia. Surely it is time to wake up and make a commencement in the production of these great articles of consumption.

Fifteen years ago Denmark was the most depressed agricultural country in the world, and last year she exported 54,000 tons of butter. I have hurriedly given you a few important facts with an endeavor to stimulate the farmers of this country to greater efforts, and have placed on paper a few ideas on modern farming.

THE MODERN FARM, STOCK RAISER AND DAIRY.

In the age in which we are now living, when knowledge of the most improved and modern methods of farming is so easily obtained and within the reach of all, every farm, large or small, be the owner rich or poor, should have a neat, comfortable and prosperous appearance to the traveller who passes by. Buildings need not be expensive, but with lumber and all material so easily obtained, and prices low, I see no reason for dilapidated and weather-beaten houses and barns even on the smallest farms. If

the owner is not able to purchase paint, a dollar's worth of lime and a few days labor will give a neat and tidy appearance to the outbuildings and fences.

In passing through many counties, or portions of every county in the Province, I have noticed with feelings of pain and regret how many farms have been allowed to deteriorate in value for the want of proper cultivation and care. Parts growing up to bush, and acres and acres of good land that might be producing hay and pasturage standing with a poor growth of wood and brush, yielding no return. No farmer, rich or poor, but should find time during the year to bring into cultivation at least one acre, and more, if he can, each improved acre yielding a return, and helping to improve more acres, and so keep on adding to the value and productiveness of his farm. We cannot afford to have large wastes of land giving no return. I am convinced that the one cause, or at least the principal cause, of our not advancing or making such advances in agricultural pursuits as the opportunities at our disposal require, or keeping pace with other provinces of the Dominion, having no greater natural advantages—the one great cause I maintain is that we are purchasing from outside the Province too much, and producing too little at home. One acre of land will produce all the potatoes and other vegetables required for an ordinary sized family for one year. Then why should not every farmer raise all his own vegetables, and have some to sell; raise all his own oats, barley, peas and beans, and have some to sell; all his own fruit, and possibly have some to sell; all his own butter, eggs, cheese and poultry, and have some to sell; all his own beef, pork and mutton, and have some to sell; and our large farmers, by keeping improved breeds of cattle and sheep and hogs maturing young, not only supply our own market, but take a share in the export trade to Great Britain as well as Ontario and Quebec? It is a well known fact that pounds of beef, pork and mutton can be laid on young animals cheaper than old ones; hence a corresponding increased profit. In beef breeds we have the Short Horns, Polled Angus

and Herefords. Either of these breeds can be made to weigh from 1,200 to 1,500 lbs., live weight, at 20 to 30 months old; thus it can be easily seen that the earlier we get our steers to market, the more clean money we make. Having briefly given a few hints on farming and stock raising, I will now pass on to what I have a more practical knowledge of, from ten years' experience.

THE DAIRY.

First, the barn, to make the dairy profitable, must be warm and convenient, in order that the cows can be made to produce milk and butter, instead of a large portion of their feed being consumed for animal heat. Time, with man, represents money; therefore all arrangements for feeding, watering and care of the cow should be done with the least labor and quickest despatch. Having arranged the barn and dairy according to the size of the farm and number of cows, the first and most important starting point is, that the cow must be the best; second, keeping and feeding to the best advantage; third, the most profitable way of caring for and marketing her product.

On the choice of your dairy cow depends the whole success of the dairy. You would not now undertake to plough with the old wooden plough your forefathers used, or hoe potatoes with the hoe made by the blacksmith for your fathers, and the most unprofitable tool on the dairy farm is a poor cow. It is not only that she is no profit; that would be bad enough, but far worse than that, she runs you into debt. If a man keeps one cow and she is a poor one he soon finds it out, and will get rid of her, but in a herd a cow may look well and even give a fair flow of milk, and yet she may not only fall short of paying her own keep, but be eating up the profit made by her neighbor; so the farm has no profit on the pair, and so on; hence the importance in the dairy of testing all cows and weeding out, or killing all inferior animals, as the poor cow is not only deteriorating and becoming of less value as years go by, but is transmitting her worthlessness to the

direct loss of her owner. The form of a dairy cow is so well known to most of you that it is scarcely worth while mentioning it, but some points are so necessary to a perfect cow that they cannot be too strongly urged. A good cow must be long, level, with capacious body, long, light neck, thin withers, deep flank, and rich, soft, mellow skin, showing deep orange color under white marking and inside ear. As viewed from the side, she should be a perfect wedge shape, deep behind and light in front, and viewed from behind, must show ample room to carry a large, full udder with ease. No cow can do this that is of a beefy formation. The udder must extend well forward and reach well up behind, square, level, and not too deeply quartered, with teats of good size, evenly placed and apart. The udder must be large and handsome when full, and when empty loose and soft, and milk out to nothing. Taking the common cows in the country, as a basis you pay \$30 for a cow that runs you \$30 in debt by the end of the year, and gives you a calf no better than herself. It is a poor investment, but on the other hand, if you pay \$50 for a cow that makes you \$30 profit at the end of the year, as such a cow will and should do, and gives you a calf still better than herself, you have made a good investment. If you get \$5 a year for \$50 cash investment it would be called usury, but from a good cow costing, say \$50, you can easily make \$25 beside her keep, and you spend no more time in milking and feeding the good than the poor cow. It is easy to see how much more profit is gained by starting right. If you go a little higher and begin with a pure bred registered cow, the first cost will be more, but she will yield you even better interest on your money, while her offspring will be worth more than double of any unregistered animal. Having started with the right cow, and assuming it is butter you are going to make, I will next speak on the cow and general management of the dairy.

FEEDING CATTLE.

Beginning with the feed, first cut all your hay, thus saving one-quarter, if not one-third. The cut hay should be wet and

mixed with the grain and feed, and at regular times, morning, noon and night. I prefer the three feeds, although some good authorities say the same quantity fed in two feeds gives just as good results. My way is to begin, say, at 5 o'clock a. m., clean out the stable, brush off the cow, rubbing the udder with a soft cloth; if necessary to wash the udder do it with tepid water, and be careful to dry it well; then give the morning feed. A good, all round ration in this Province, and the most of it can be raised on the farm, is, according to the cow, say 15 to 20 lbs., cut hay, wet and mixed with 5 to 6 lbs. of grain, oats, peas and barley, and 3 to 4 lbs. bran, middlings and a little salt; the above feed at three feeds; if you have ensilage, one feed, say 30 lbs., reducing your cut hay and meal one-third.

Between 10 and 11 a. m. we water, if fine, outside, if cold, inside; and I am inclined to think the time is not far off when milch cows will be fed and watered in the stable from fall until spring. After the morning feed, begin the milking with the same cows and at the same time, thus ensuring regularity with the same milkers to the same cows, and all treated with the greatest kindness. After watering in the forenoon, every animal has a thorough carding and brushing. This is most important, not only for the health and comfort of the cow, but for cleanliness in milking. If the cow is not kept well groomed, the dirt dries into the hair and then the act of milking shakes it down like dust into the pail, rendering the milk unfit for human food. For bedding, I find nothing equal to sawdust; nothing else will absorb so much of the valuable plant food in the liquid manure as sawdust. I know this from ten years' actual experience. If you are not near enough to the saw mill, the next best thing is dried muck or cut straw, barley or pea straw preferred. In the pasture, unless you have good warm clusters of trees, a pasture shed should be provided. When, as is often the case, the pasture is some distance from the barn, and there is no shelter, cows are compelled to be in the cold rain from morning till night. All this means not only

discomfort to the cows, but a loss to the owner, for food that should go to make milk goes to keeping the cows warm. This has often been noticed during cold, rainy spells, when it shows in the milk pail. It is not necessary to go to great expense; a pole shed with a cover of straw will answer every purpose. A shed of this kind answers another purpose. Cows fall off in their milk yield just as much in hot weather as in cold, and one way of checking this is to provide a comfortable place for the cow to escape the heat of the day. I have said but little about the importance and value of the silo. From eight years' experience I am convinced that more feed and better feed for the dairy can be taken from an acre in corn silage than from any other crop, and for confirmation I will read a few extracts from late writers on the silo of well known authority:—

W. D. Hoard, Ex-Governor of Wisconsin, and editor of *Hoard's Dairyman*, writing on ensilage, says:—"Let me say at the outset, that the question is hardly one of latitude or climate. It is a question of storing and feeding. Here in Wisconsin, we are fast coming to the conclusion that the most costly of our feeds is pasturage. The economy of practice must be measured by results obtained, and wisdom of expenditure. Measured by these considerations, pasturage milk costs us more than any other, taking into consideration the fact that the average acre of the best pasture will not produce more than 1,300 to 2,000 pounds of milk, while an acre of corn fodder put in a silo will easily produce 8,000 to 10,000 pounds. We find that corn fodder is the most easily, cheaply and safely handled in the silo. The damage from the elements in dry curing is very great, and there is added the loss or waste in feeding. The silo, practically, is a substitute for pasturage so far as the succulence of the food and quick digestibility is concerned, without its expense. Every year in Wisconsin witnesses the increase of those who believe and practice a partial soiling at least, and they do it through the silo. Now if it is of the highest economy for us to own no waste land, or land which yields a low return; if it is of the highest economy for us to get the largest return possible for the value of the food consumed; if it is of the highest economy for us to put our land in the most effective shape possible for the use of our animals, does not the same economy appeal to you as powerfully as it does to us?"

The New York Geneva experiment station has found corn silage the best for milch cows. They say that after several experiments it was found to increase the milk flow and at the same time to increase the amount of butter fat.

At the relative prices ordinarily holding for different foods, milk was generally produced at lower cost, and the cost of fat production was lower when corn silage constituted part of the ration than when many other rations were fed.

Another eminent authority says:—Silage may be fed with advantage to all classes of farm animals, milch cows, steers, horses, mules, sheep, swine, and even poultry. Neither does this enumeration finish the list of animals that take readily to silage. Kuhn states that not only did the various European breeds of cattle in the herd of the Agricultural College of Halle (Germany) eat corn silage with a relish, but this was also the case with the long-horned Sanga, directly imported from Africa; the Yak, a native of the plains of Central Asia; and the crosses of Yak and Gayal. The corn silage was also eaten by all of the common breeds of sheep, and by the Asiatic and African breeds; the fine-wooled Electoral, Negrettis, and Rambouillet, especially, took to it kindly. The Mouflon crosses also ate it, but less readily. It was liked by goats, and especially by those of the Angora breed. The same was true of the asses and the mules bred at the Halle College.

Silage should not be fed as an exclusive coarse feed to farm animals, but always in connection with some dry roughage. The nearer maturity the corn is when cut for the silo, the more silage may safely be fed, but it is always well to avoid feeding it excessively.

The silo should always be emptied from the top in horizontal layers, and the surface kept level, so as to expose as little of the silage as possible to the air. It should be fed out sufficiently rapidly to avoid spoiling of the silage; in ordinary northern winter weather a couple of inch layer should be fed off daily.

Silage is par excellence a cow feed. Since the introduction of the silo in this country, the dairymen, more than any other class of farmers, have been among the most enthusiastic siloists, and up to the present time we find a larger number of silos in dairy districts than in any other regions where animal husbandry is a prominent industry. As with other farm animals, cows fed silage should receive other roughage in the shape of cornstalks, hay, etc. The quantities of silage fed should not exceed forty or, at the outside, fifty pounds per day per head.

CARE OF THE MILK.

Next after milking is the care of the milk. The shallow pans for setting milk have become a thing of the past, and there we leave the old tin pans and speak of the deep setting creamery submerged in ice cold water for twelve hours; then drawing off the skimmed milk, leaving the cream to be put in its proper vessel for ripening for the churn, and what a saving of labor in washing pans and so forth. But this greatly improved and labor saving system did not come to stay. It is now fast being superseded by the separator. The hand machine will pay well if you have from five to ten cows; more than that you should have a power separator; we with 30 cows use the small power separator; in 20 minutes after the last cow is milked the cream is in one vessel, to be taken to the dairy to ripen for the churn, the warm skimmed milk is fed to the calves, and they cannot tell it from new milking, all without the aid of woman. On churning days, with the barrel churn and power to work it and the butter worker, men can manage the dairy and churn out butter far superior to the old fashioned way with shallow pans, dash churns and women's hands to work it. So instead of making slaves of women, the modern mode of separator, churn and butter worker, by power and with men, leaves the women free from toil and drudgery, ready and willing to take gentle exercise with the new found pleasure, "the bicycle."


The butter being properly made from the cream ripened to

an even state and at the right temperature, salted by the same rule at every churning, should always be put in packages of a uniform size for the English market, and here is where we must look for a market for our surplus produce of every kind. Fifty lb. packages are as saleable as any; for our local market, of course, smaller packages should be used. Our farmers must expect and prepare for keener competition in prices in the future, even more than in the past. To meet this we must keep pace with the times, as manufacturers are improving their machinery by all modern inventions until the cost of production is reduced to the very lowest point. A few years ago horse nails were made by being hammered out singly, and ordinarily cut nails were made by a machine which took one man ten hours to cut a keg of nails (100 lbs.), and now one boy can tend six machines, thus making six nails in half the time it took to make one before. This brings me back to

THE DAIRY COW.

She is a factory for turning out goods; the average scrub cow is putting only 3,500 lbs. milk a year into the dairy. It costs a farmer about \$35 a year to run that machine, and if sold at a good price for butter or cheese the profit is on the wrong side. This is easily changed and the profit put on the right side by weeding out the poor cow; and by judicious selecting and breeding and feeding your cow you can get cows to yield not 3,500 lbs., but 7,000 to 10,000 lbs. per year, thus saving, at least, one half your feed. We must study the breeding and care of this butter and cheese producing machine. It is true that during the last few years we have made some progress in this important industry, but there is room for almost unlimited production of butter and cheese. England imports annually of butter \$65,000,000 worth, and so far Canada has supplied less than \$2,000,000 worth of it. In cheese we are doing better; last year of the \$26,000,000 worth of cheese imported into England, Canada supplied \$16,000,000 worth. I think now is the time for Nova Scotia farmers to wake up and take part with Ontario and Quebec for a share in this

great English market, and having decided to manufacture butter and cheese, you have little trouble in securing the cow. The Jersey, Guernsey and Ayrshire are the great dairy breeds. The Ayrshire has long had a reputation as a large milker and a superior cow for the production of cheese. The Guernsey is a large and rich milker, and for butter stands next to the Jersey. I have some delicacy in speaking of the Jersey, of her merits as a butter cow, for fear of giving an impression that I was trying to advertise; but I assure you I have no Jersey cows to sell, and would rather buy two good ones than sell one; but from long study of the Jersey cow, as well as ten years' actual experience in her wonderful power to produce, as a butter cow I have no hesitation in saying she stands peerless above all other breeds. The origin of the Jersey is unknown. She is supposed to have existed as a pure breed since the date of the Norman conquest; but be that as it may she has an unbroken record for over 500 years, and it is undeniable that nearly 200 years ago her characteristics were so thoroughly and persistently fixed and passed with such certainty to her offspring, and she had to the inhabitants of the Island of Jersey so completely demonstrated her superiority as a butter maker, that they were not satisfied to remain with no other protection against the introduction of inferior blood than was offered by the fence of the sea, but a stringent law was passed prohibiting the importation into Jersey of a cow, heifer, calf or bull, and to this day no foreign cattle are allowed to be landed on the island. That she has been bred for so many years as a profitable butter cow, bred for a purpose, and that a special purpose, butter, demonstrates that it is a delusion to compare her with what is called a general or all purpose cow. The cow for the dairy cannot under any circumstances be selected for those qualities which will produce fat. The two natures are incompatible. To have the best meat we must get rid of every tendency to milk, and to have the best butter we must obviate every disposition to fatten; we cannot have both qualities in the same animal, or to state it more



concisely the fat from the food cannot be deposited in two places at the same time. We cannot look for it in both flesh and milk. The practical butter makers of the Island of Jersey knew this, and did not attempt to produce the improbable general purpose cow.

THE VALUE OF THE JERSEY.

Pages—yes, quires—could be written on the wonderful production and qualities of the Jersey cow, but I must not enlarge. It was not until 1850 that the first Jersey cow was imported into the United States, and long after that into Canada. It was first thought to be a doubtful experiment to bring the celebrated butter cow from her warm island home, but it has become a well-known fact that since transplanting her in the New England states and Canada she has developed a butter record unknown on the island of Jersey, producing as high as 36 pounds of butter in one week, and over 900 pounds of butter in a year. But she achieved her last and greatest victory over the other breeds at the World's Fair in Chicago, 1893, with various tests extending over ninety days with all other breeds, for both butter and cheese, with the following results. Taking each separate test, and taking all of them in the aggregate, the results conclusively show that the Jersey—

- 1st. Gave more milk.
- 2nd. Made more cheese.
- 3rd. Made more butter.
- 4th. Gave more solids other than butter fat.
- 5th. Required less milk to make a pound of cheese.
- 6th. Required less milk to make a pound of butter.
- 7th. Produced a pound of butter at least cost.
- 8th. Made cheese of a higher quality.
- 9th. Made butter of a higher quality.
- 10th. Demonstrated their ability to properly assimilate a greater quantity of food and return a net increased profit.

These tests proved these facts, and in proving them gave the

stamp of publicity and authenticity to the Jersey cow as the greatest butter cow in all essentials that the world has ever produced.

I have given you my views hurriedly and with but little time for preparation, and have no desire or inclination to urge them upon others. I know there are hundreds, yes, thousands of dairy-men in this province, in this year, 1896, who will say that other breeds, on the whole, are preferable to the Jersey. I have no personal desire to change that man's mind, and I have only one request to make, that in order to obtain the full value of his butter, that he will stamp the butter or package with the name of the breed from which it is made, whether Holstein, Ayrshire, Short Horn or scrub, and not use an article manufactured in the States called butter color, which I saw advertised in an American paper as being so perfect in color and harmless in taste, that the Jersey cow herself could not tell it from her own.

ADVICE TO YOUNG MEN.

Before closing let me say a few words to the young men, in order to arouse them to an effort to elevate the standard of the agriculturist in this Province. An old Roman poet who lived before the birth of Christ said, "Time spent in the cultivation of the fields passes very pleasantly," and all through the early ages tilling the soil was regarded as one of the most ennobling pursuits of man, but if so regarded in days gone by, when but the crudest tools were known, when the inventor had done little to lighten the labor of those who bore the burden and heat of the day, surely the cultivation of the land in our day must be esteemed a delightful occupation, and so it is. Healthful, ennobling, invigorating and scientific, with implements of all kinds to make easy what was before drudgery, the tilling of the soil has become an art worthy of our best men. The ancient Romans esteemed two occupations, and placed them higher in the social order than all others; they were military service and agriculture. All other labor was assigned to slaves, while the man who tilled the soil was as much respected

and stood as high in the social scale as his brother in a government office or in the military service. Ancient Rome was right, for the prosperity of a nation is dependent on her agricultural resources and her agriculturist. As our farming methods improve, and our farmers become more scientific and skillful, our country will progress and achieve great renown among the nations of the world; so it has been, and so it will be. While inventive genius has been busy in devising ways and means to lessen and facilitate man's labor, the agriculturist has received the highest consideration. No kind of labor was formerly more arduous and full of drudgery than the work on the farm. This is now materially changed; the term farm implements once included little more than the scythe, sickle, shovel and rake, and the farmer was in every sense a laborer. To-day the farmer is an engineer, for the well-equipped farm is provided with a score of modern implements, and often a steam engine. The successful farmer of the present day is a man of enterprise, broad, intelligent, educated, and destined to command the honor and respect of his country. Young men should look to agriculture as a profession, worthy of their greatest efforts.

I regret, in passing through many parts of the country, to find farms vacant, young men having left the country, population in some of the counties having fallen off very materially. Various causes are assigned for this, and I am not going into any discussion of the point raised. Governments, both Local and Dominion, have done, and are doing, much to encourage agriculture, but the farmer must not depend upon government aid. He must rely mainly upon his own individual efforts, and by his example encourage his sons to take a warmer interest in the cultivation of the soil. Has he done all he could to keep the young men at home? Has he given them all the encouragement on the farm that they require? It strikes me very forcibly that going back as far as forty years ago, if the farmer of that day had divided his farm with his sons, and they in turn divided again, each piece to-day would have

been worth more than the whole, and our population largely increased. Instead of that, men allow their sons to go to the United States, and their farms to go to bush or deteriorate and become waste land. I ask the young men of the present day to look upon agriculture as a profession worthy of their best efforts, and if they take hold of it with that energy and perseverance that merchants and manufacturers require to put into their business in order to compete with the keen rivalries of the age, they will succeed.

MESSRS. E. B. ELDERKIN and ISIDORE LEBLANC also briefly addressed the meeting, expressing their pleasure, as members of the Executive Committee, at being present on this occasion.

The meeting adjourned.

PAUL C. BLACK,
SECRETARY.



SPECIAL SUMMER MEETING
OF THE
NOVA SCOTIA FARMERS' ASSOCIATION,

Held at Whycocomagh, C. B., July 1st, 1896.

Meeting called to order at 2.30 p. m., President J. B. McKay in the chair.

W. SAXBY BLAIR first addressed the meeting on Soil Moisture, his remarks being a continuation of his address at Mabou.

JACOB HART, of Whycocomagh, was pleased to have heard Mr. Blair's address. Here in Whycocomagh we depend largely on our hay crop. The land runs out of grass in about three years. It is hard to get manure. It is customary to plow and crop with grain, seeding down to grass at the same time, with no manure. Then, when it runs out, plow again. We only plow once. Wouldn't it be best to plow twice—in the fall and again in the spring?

COL. BLAIR said that the great trouble in plowing side-hills, like those in this vicinity, in the fall, was their liability to wash, and be lost in the streams. He would advise plowing as little as possible, and top-dressing with manure.

MR. HART said that he referred to level fields. He wanted

to know the best way of reseedling them when the grass has run out. It *doesn't* pay to raise roots.

COL. BLAIR—It *does* pay. The farmer cannot raise cattle or hay without roots, or some succulent substitute. I wouldn't seed down with only one plowing, but would give thorough cultivation.

MR. HART—I repeat that it doesn't pay to grow roots.

COL. BLAIR—Then raise peas. I would place great emphasis on this crop. Raise peas and oats for green feed and for hay, and also grow peas to plow down and thus enrich your land.

D. MCG. JOHNSON, of Stewiacke, had been very successful with plowing old sod in the fall, and using a small quantity of manure, but latterly grows roots, and manures the land when preparing for the root crop, and finds it more profitable.

MR. HART—About intervalles and light intervalles in Cape Breton, what is the best way to fertilize them. These are pastures.

COL. BLAIR—Use bone meal and land plaster.

The meeting adjourned until this evening.

EVENING SESSION.

The President called the meeting to order at 7.30 o'clock.

D. MCG. JOHNSON was sorry to learn that the Agricultural Society in this place had ceased to exist. The people here should revive it at once, as a society is a great benefit to a community in improving the live stock, and many other ways. From what he had seen of this district, he judged it ought to be a good sheep raising section. Sheep would do well on these fine, hilly pastures. Sheep pay as well as any other kind of stock on a farm. Another department on the farm which can be made to pay well is the rearing of poultry. A dozen hens are better than a poor cow. Turkeys also are profitable, requiring only a small outlay to start with—say three dollars in the spring, and, with good management,

you ought to have thirty or forty turkeys to sell in the fall, equal to a yoke of oxen.

WM. CORNING, of Yarmouth, said that on the islands along the coast in his section, Cheviot sheep were found to do the best.

W. W. HUBBARD said that our native sheep have been largely neglected, and have therefore deteriorated. His experience has been chiefly with the dams. A cross of Shropshire or Leicester gives good results the first time, but it doesn't do to continue crossing, or you are apt to get the Shropshire into disrepute. Our markets here are not discriminating as to the quality of wool. All grades, generally, sell for the same price. Some people think that sheep don't want much water. This is not so, as they need plenty of it. They require dry quarters, but don't shut the door on them. There is money in early lambs. Ewes suckling lambs require milk-producing food. Bean and pea meal steamed is good. Don't feed too many roots just before lambing. Pea straw and clover hay are fine for sheep. Sheep are good scavengers. They will kill whiteweed or ox-eye daisy, also couch grass, but they should be fed some grain in addition. Don't turn sheep into a young orchard or they will ruin the trees.

GEO. C. LAURENCE endorsed Mr. Hubbard's remarks. Don't overcrowd your sheep. Keep the pasture well fenced, and see that the dogs are kept away from them. I think there is money to be made here in Whycocomagh in sheep farming.

COL. BLAIR told how lambs were taken from P. E. Island to Ontario at a cost on the Island of two dollars per head, fed on rape in Ontario and re-shipped to England at a profit, after paying the freight. Clear off the second growth of woods on these Cape Breton hills, and seed them down for sheep pastures. Millions of sheep can be raised in this Island, and you have unexcelled facilities for shipping them. Provide plenty of new blood in breeding. Give the sheep plenty of ventilation in winter. He is

also of the opinion that it isn't a good plan to feed roots to ewes, or cows either, for six weeks previous to parturition.

G. C. LAURENCE—Don't be too changeable in breeding. Stick to one breed. Our agricultural societies mix up too many breeds. With cows, test your milk. A high color is not always a sign of richness, and the cow which gives the most milk isn't always the most profitable in the end.

MR. MCLEAN—Whycocomagh—We want low lands to raise hay for these sheep. Pastures are all right in summer, but we must have winter feed as well.

THE PRESIDENT—About shearing. I shear my sheep in April, and find that they stand the late May and early June rains better than if left unshorn.

W. W. HUBBARD—My experience has been the same, but I am careful to blanket the sheep for awhile.

THE PRESIDENT, in introducing Mr. R. W. Starr, of Wolfville, asked what was the right distance apart to plant apple trees.

MR. STARR—That depends on the soil and varieties. Not less than thirty feet. We usually plant two rods apart. You can set plum trees between if you like, but you must provide fertility for both, and plan to cultivate such a mixed orchard all the time. Get the kinds which do best in your own locality. He described the starting of an apple nursery. Plant in rows four feet apart, trees one foot apart in the row. Don't cultivate after August 1st, or you will have the stock injured by early frosts. Prune for two years, and cultivate four years. Leave only one bud the first year. He described the method of setting an orchard. Mark where the tree is to stand with laths driven into the ground. Dig round the laths but leave them standing. Set the trees on the little mound where the laths stood. Spread the roots out well and fill in solid with earth. Cultivate the same as a hill of corn. Bank up around the trees in the fall for the first two or three years.

QUESTION—What about canker?

ANSWER—Use the knife.

QUESTION—What do you do for lice?

ANSWER—Use kerosene emulsion.

QUESTION—Would you leave the orchard in grass?

ANSWER—No; if a tree is worth anything it is worth cultivating well.

QUESTION—What is the best manure?

ANSWER—We need plenty of potash for trees. Wood ashes are good. Apply broadcast.

QUESTION—What about the black knot in plum trees.

ANSWER—Use the knife freely, and be careful to burn all infected limbs after cutting them off.

QUESTION—Would you advise planting an orchard on swamp land?

ANSWER—No; not till it is well drained.

QUESTION—What makes the best wind-break?

ANSWER—Spruce is about the best.

COL. W. M. BLAIR next addressed the meeting on the cultivation of the soil. His remarks were substantially the same as in his address at the Mabou meeting.

A very lively discussion took place between Col. Blair and Messrs. Jacob Hart, B. W. Chipman and E. B. Elderkin, Col. Blair having roused the ire of these gentlemen in stating that he believed there were lots of common cows which, if as well fed, would give as good results as the Jersey.

The resolution *re* resignation of Col. Blair from the Superintendency of the Experimental Farm at Nappan, was moved by G. C. Laurence and seconded by Jacob Hart. Passed unanimously.

The meeting adjourned.

PAUL C. BLACK,
SECRETARY.

SPECIAL MEETING
OF THE
NOVA SCOTIA FARMERS' ASSOCIATION,

Held at Arichat, C. B., July 2nd, 1896.

The proceedings opened with an address of welcome by Hon. Isidore LeBlanc. After a few remarks by the President,

G. C. LAURENCE delivered an address on the general business and position of the farmer.

D. MCG. JOHNSON followed, giving some points on the markets open to us as farmers, and the best means of securing them.

COL. BLAIR next took the platform, and delivered a most able, eloquent and instructive address on the agricultural interests of this province.

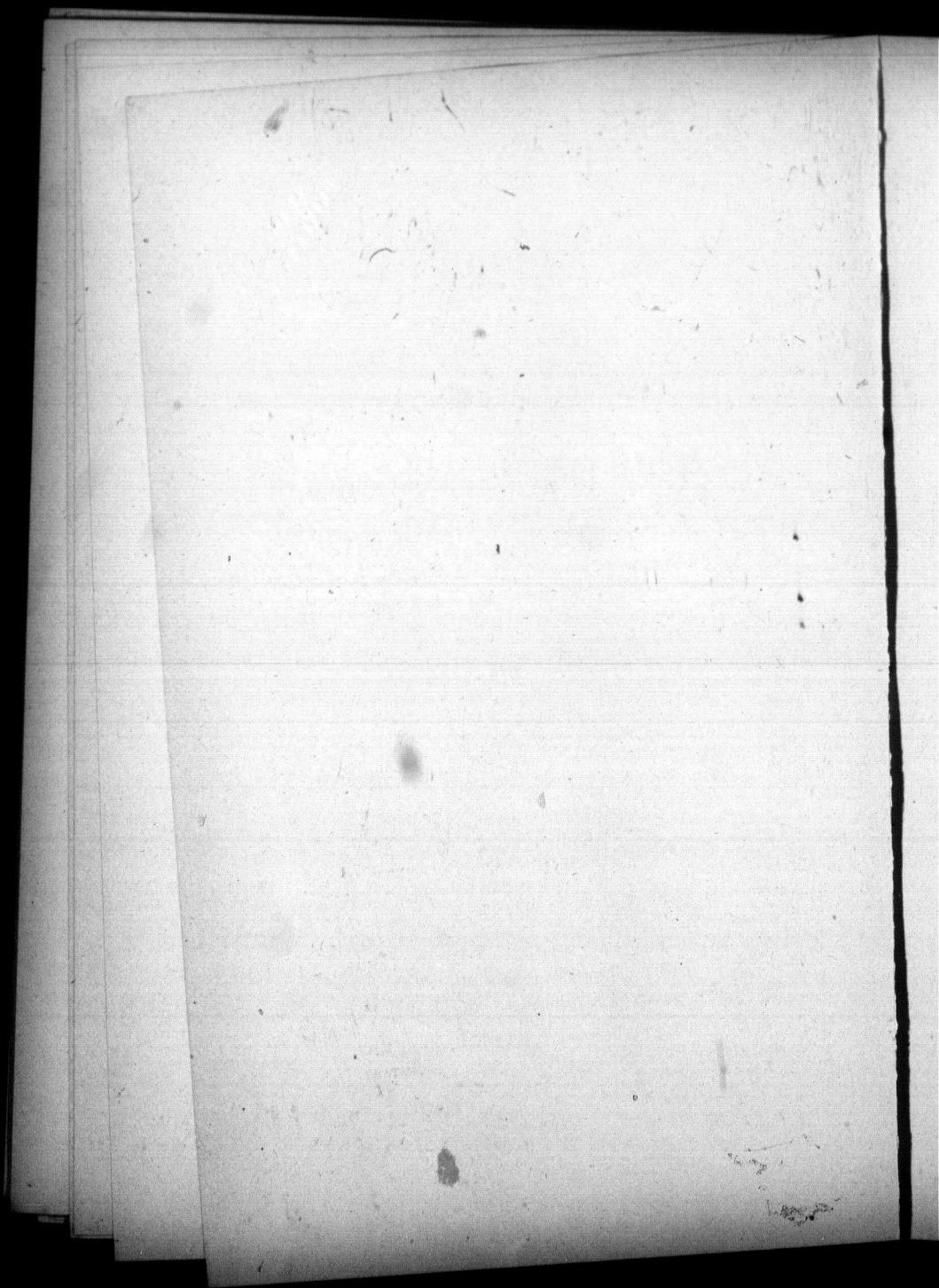
R. W. STARR spoke on fruit culture, and a discussion followed on cranberry and strawberry culture.

W. SAXBY BLAIR made some remarks on the culture of oats, and described the experiments being conducted with the crop at the Farm at Nappan.

A resolution expressing regret at the retirement of Col. Blair from the Experimental Farm was moved by Mr. LeBlanc, seconded by Dr. Fixott, and carried unanimously.

The meeting adjourned at a late hour in the evening.

PAUL C. BLACK,
SECRETARY.



PROCEEDINGS
OF THE
NOVA SCOTIA FARMERS' ASSOCIATION.

FIRST REGULAR ANNUAL MEETING,

Held in Oddfellows' Hall, Middleton, January 26th, 27th
and 28th, 1897.

FIRST SESSION, TUESDAY, JAN. 26TH.

The meeting opened at 2 o'clock, President J. B. McKay in the chair. The President read the following:

ANNUAL ADDRESS.

GENTLEMEN,—It gives me great pleasure to meet the farmers of Nova Scotia in this beautiful valley, where you have been ahead of us in the East in working for the promotion of the agricultural interests of your several localities. And it is my privilege to be here to extend to you all a hearty welcome to this, the first annual meeting of the Nova Scotia Farmers' Association, and to ask your hearty assistance and co-operation in making our meeting interesting and instructive.

When the Secretary shall have read his report, you will see that we have passed the elementary stages of growth as an Asso-

ciation—stages during which a great deal of our work has been of a fundamental nature; and while we have not been able to do as much as we would like to have done, or made as favorable a showing as some might naturally look for, yet from the report of the year's proceedings you will see that we have done a good deal. And under new officers, to be appointed here, I trust that the Association may, during the coming year, be able to carry out more work of a practical nature than what we have been able to do in the interests of the Province. In addition to routine and business matters that you will have to deal with, you will have the pleasure of listening to papers and addresses from specialists and progressive farmers from our own and sister provinces; and I trust you may all feel that the meeting is yours, and that the discussions on the different subjects, as they are presented, may be of that general nature that makes meetings such as this most interesting and profitable. I am sure that we will all be able to carry home from Middleton some ideas that will better enable us to adapt our work and methods to the requirements of the special locality where we are located, or to the particular branch of agriculture we have decided to follow.

It has further been suggested by the Executive that opportunity be given to discuss our Provincial Agricultural School at Truro, which many of us feel is not accomplishing the results that we anticipated. We are certainly all deeply interested in agricultural education, and realize more fully year by year that the farmers of the future, in order to be successful in their life's work and become useful citizens of our country, must acquire a broad and liberal education. It is of great importance to us and our children that we have an institution in our midst where such an education may be had for our boys. We ought to have a school to which we could point with pride, with a practical and efficient staff of agricultural and scientific professors or lecturers, that would year after year send out a class of graduates that would be an honor to the school, to themselves and to their country.

It has also been proposed that some time be allotted for discussing the work of our Provincial Records for live stock, that we may be able to take that action in connection with registering our different classes of pure-bred animals, that may commend itself as best in your judgment.

In reviewing the season now past—a season in which we have been blessed with bountiful crops throughout the length and breadth of our Province—yet a season in which nearly all our staple farm crops and products had to be sold at figures that in many instances did not leave any margin of profit for the producer, the great lesson taught ought not to be forgotten, that in order to cope successfully against the keen and ever-increasing competition of the age, we must pay more attention to details. We must, by well directed skill, reduce to a minimum every item in the cost of production, and by combining and co-operating in our common interests, and using every legitimate means at our command to secure better facilities and lower rates on land and sea for the storage and transportation of our products, so that we may be able to place them in the markets of the world in a condition that will attract and secure the most desirable class of buyers, and at figures that will leave a living profit to the producer. The discussion of this question, then, of accommodation and lower rates, demands our best thought and most careful consideration.

We have here in our peninsula home a heritage of which all her children should feel proud. We have a Province, with a people, with advantages, and with a variety of resources, that are not excelled on our continent to-day; and I am one of those who believe that we, as farmers, are but on the border-land of possibility—that we are only awakening to the vastness and diversity of our resources. It seems to me that education and co-operation are the two most essential factors that we need to take hold of in order to attain the success we have so long been seeking in the different branches of agricultural work. And, to my mind, this Farmers' Association ought to be a potent medium of education

to those of us who have been unable to get an agricultural training at any of the institutions in our country. At these meetings we get the best thoughts of the most successful farmers in our land. We learn of their successes and failures, and by interchanging ideas and experiences we are able to acquire much information of a highly practical nature that it is impossible to get from any other source. And if there is one thing, that above others, makes me hopeful for the future of our country, it is the desire that year by year is becoming greater and more widespread, for greater knowledge on the part of our farmers. I trust that this Association may, year by year, be able to do much to meet that desire, and that we may go home from these meetings filled with greater enthusiasm in our life's work, and more faith in ourselves and our country.

In the discussion which followed the President's excellent address,

WM. YOUNG, Kentville, said that it would be difficult to get this meeting to arrive at any definite conclusion on Tariff matters, as there would be such a difference of opinion among those present.

D. MCG. JOHNSON, Stewiacke, said the Executive of this Association had considered this matter, and then read the following resolution :

Resolved that, in view of the difficulty in arriving at a common basis of opinion on the Tariff question, this Association does not think it advisable to discuss this question at present, but would suggest that a committee be appointed to discuss this question, and submit a report at a subsequent session.

Resolution seconded by M. G. DeWolfe, Kentville, who suggested that the President name such a committee.

WM. YOUNG—In all agricultural institutions we should endeavor to keep out politics. Such a resolution as has just been moved might cause some dissatisfaction. A political meeting is the place for such a discussion.

MESSRS. J. RUFUS STARR, Port Williams, and S. C. PARKER, Berwick, also spoke against discussing the Tariff question at this meeting, and it was finally suggested that the Secretary should acknowledge the Minister of Agriculture's letter, and say that the Association thought it best not to discuss the tariff, owing to varieties of political opinions among its members.

Moved and seconded that the President's address be adopted. Passed.

THE SECRETARY, Paul C. Black, then submitted the following report :—

SECRETARY'S REPORT.

Mr. President and Gentlemen :—

I feel that some apology is due the members of this Association for the non-appearance before this of a printed report of the proceedings of this Association since its formation in July, 1895. The material for the publication of such a report was ready shortly after the meetings held in Cape Breton last summer, and your Secretary was of the opinion that a report should have been issued at that time, but the Executive Committee thought differently, and hence no report has as yet been issued, excepting the brief circular addressed to the Agricultural Societies last autumn.

The organization of this Association was the result of overtures to the Local Government, made by the late Farmers' and Dairymen's Association, asking for the establishment of County Associations throughout the province, which should be able to send delegates to the annual meetings of the Provincial Association. I had the honor to act as Secretary of the late Farmers' and Dairymen's Association for some ten years, and, if I remember correctly, my esteemed friend, Col. Blair, who was one of the charter members of the old Association, and who always took a prominent part in its work, was, with Mr. J. Rufus Starr and myself, appointed a committee to interview the Government on this matter of the establishment of branch Associations. The

Government went even further than we had hoped, and an Act was passed in 1895 providing for the establishment of the Nova Scotia Farmers' Association, with a provision for the amalgamation with it of our old Farmers' and Dairymen's Association.

The new Association was formed at Antigonish, on the 3rd of July, 1895. This meeting of organization was well attended, and was most representative, delegates being present from thirty-four Agricultural Societies, representing sixteen counties, Queens and Shelburne only being unrepresented; two delegates from the Fruit Growers' Association, two from the Farmers' and Dairymen's Association, and twenty-one members of the latter Association, in all fifty-nine persons, constituting the charter membership of the Nova Scotia Farmers' Association. The meeting at Antigonish was almost purely one of organization, the time being fully occupied with the election of officers, drafting of by-laws, etc.

The *personnel* of the Executive elected at this meeting was thoroughly representative, its members being chosen from different sections throughout the Province.

The first regular meeting of the Executive was held in the Province Building at Halifax on the 22nd August, 1895. At this meeting the various accounts of delegates' expenses were submitted and examined. The discussion of the by-laws was taken up, and a sub-committee appointed to examine the by-laws already submitted to the Association, the committee to suggest any alterations which, in its opinion, would be advisable, and to hand in a report to the Executive.

The matter of freight rates—more particularly to the West India ports—came before this meeting of the Executive, and a resolution was passed condemning the exorbitant rates at present in force on produce exported to those markets. A committee was appointed to interview Messrs. Pickford & Black, with a view to getting better rates on their line of steamers running to the West

Indies. The committee waited on this firm, but met with rather an evasive reception.

The second meeting of the Executive was held at Halifax to consider the best mode of appropriating the annual grant for Exhibitions, and the following resolution was unanimously adopted:—

"Resolved,—That in the opinion of the Executive it would be desirable, in the interests of Agriculture of Nova Scotia, to have an annual Provincial Exhibition, and this committee is also of the opinion that the city of Halifax is the best and most suitable place for holding such an Exhibition."

As a result of overtures from members of the Halifax City Council comprising the Halifax Exhibition Commission, a joint meeting was held between that body and the members of an Executive in December, '95, with the result that there was promulgated a scheme for a yearly Provincial Exhibition to be held in Halifax, this Exhibition to be conducted on a scale commensurate with the agricultural growth and extension of our Province. Special low railway fares to be asked for, good for every day during the Exhibition, and allowing the visitor to return home on any train, thus affording an opportunity for all members of a farmer's family to visit the Fair.

Better transportation, so that exhibits might be carried by rail directly into the Exhibition grounds.

Provision for a prize list sufficiently large to attract a large number of exhibitors in all the various sections and classes.

The establishment of larger and more attractive grounds, the erection of modern, permanent Exhibition buildings, and the introduction of special outside attractions similar to those provided at Fairs like the Industrial at Toronto.

The inauguration of an annual Exhibition along these lines would tend, it was believed, to greatly increase the interest in the various departments of farming, and would have the effect of stimulating our farmers to greater effort, and enthusing them with

new life, and the determination to achieve a larger measure of success in their chosen profession.

At the special convention of the Association at Kentville last January, this subject elicited a lengthy discussion, with the result that the following resolution was adopted :—

"Whereas,—This Association having had under consideration the proposal of our Executive, in conjunction with the Exhibition Commission of Halifax, for the purpose of securing grounds in the city of Halifax and erecting thereon good, permanent and other necessary buildings, for the purpose of holding an annual Provincial Agricultural and Industrial Exhibition, to be under the management of the Province and the city, the funds and guarantee of prize list to be borne jointly and in equal proportions by the Province and city ;

"Be it therefore resolved,—That this Convention heartily approves of such scheme, under condition that it in no way interferes with the provision made by the Legislature for the holding of County Exhibitions under the Acts passed in 1895 ; and

"Be it further resolved,—That this Convention respectfully asks the favorable consideration of the Government and Legislature of the Province to the scheme."

This resolution was forwarded to the Government, and as a result, at the last session of the Local Parliament, an Act was passed providing for the holding of an annual Exhibition on the lines suggested by our Executive, and also providing for a representation of our Association by the election of two of the members of our Executive to the Board of Management of the Exhibition.

At a subsequent meeting of the Executive two of its members were appointed on this Board, and these gentlemen will doubtless give the Association some information on this matter at the morning session on Thursday.

Another important question which came before the Executive was that of cold storage. This was a scheme to establish a cold storage depot at Halifax.

At present the market for our more perishable food products

is largely local, but by the establishment of a proper system of cold storage we would be in a position to export these products abroad, and there would be opened up wonderful possibilities for increased production of perishable food supplies in our Province. As a result of a joint meeting with a number of gentlemen interested in promoting this scheme, and after a thorough discussion of the matter, the following memorial was presented by the Executive to the Local Government :—

"Resolved,—That we, the Executive Committee of the Nova Scotia Farmers' Association, desire to impress upon the Government the great importance of a system of cold storage for the proper handling, and placing upon the markets of the world the various perishable food products of our Province, and would strongly urge upon the Government the desirability of rendering such financial assistance as may be necessary to aid in starting the scheme, such assistance not to exceed an amount equal to the interest on the cost up to one hundred thousand dollars for a term of five years. And further, that the Government provide such safeguards as may control the rates that such company shall charge for the storage of goods."

This subject of cold storage was also fully discussed at the special meeting of the Association at Kentville in January last, and the following resolution was passed :—

"Whereas,—This Convention having listened to the discussion on cold storage as an aid to the development of the agricultural resources of Nova Scotia,

"Therefore be it resolved,—That we unanimously endorse and confirm the action of the Executive of this Association in having presented to the Government a memorial urging the extreme desirability of public aid towards securing the early establishment of a cold storage depot for the better handling of the perishable food products of this Province ;

"And be it further resolved,—That a copy of this resolution be forwarded to the Hon. the Provincial Secretary."

The Government has, as yet, taken no action in this matter.

The special meeting of the Association at Kentville on the

21st and 22nd of January last was a most successful one. There was a large attendance, and those present, by their discussion of the different subjects on the programme, showed a keen interest in the work of the Association.

The following resolutions were discussed at this meeting:—

"Whereas,—It has come to the knowledge of this Association that the action of the Local Legislature of Nova Scotia in passing an Act offering a bonus of \$400.00, under certain conditions, to any individual or company starting a creamery for the manufacture of butter and cheese, has had the effect of bringing into existence some twenty or more creameries, most of which manufactured cheese which had to be disposed of in the local markets, to the detriment of all the cheese factories in existence before the Act was passed, all of which were started by private enterprise and without Government aid;

"Be it therefore resolved,—That this Association, after due discussion, recommend to the Legislature that compensation in some shape, of at least half the amount given to the cheese and butter factories, be given to these pioneers in the cheese business of Nova Scotia."

This resolution was laid on the table for six months.

"Resolved,—That this Association respectfully ask the Government to appoint a public analyst at Halifax, who, for a small fee, will promptly analyze and report on samples of artificial fertilizers sent him by farmers, and enact that penalties be imposed on manufacturers who fail to come up to their guaranteed standard." Passed.

A resolution asking for better protection against sheep-killing dogs was brought before the Convention, but on discussion, the matter was referred to the Executive.

This subject of sheep-killing dogs has been placed on our programme for discussion at this meeting.

Special summer meetings of the Association were held last July in Cape Breton, at Mabou, Whycomagh and Arichat. These meetings were fairly well attended by an intelligent class of farmers, and it is believed that much practical good will result from the holding of these meetings.

The following resolution was unanimously adopted at these meetings :—

"Resolved,—That we consider the agriculturists of these Maritime Provinces have sustained a severe loss in the retirement of Col. W. M. Blair from the position of Supt. of the Experimental Farm at Nappan, and we trust that matters may be so adjusted that his services may be continued in our agricultural interests."

The last meeting of the Executive was held at Truro in Sept. 1896, when the Secretary submitted his advance report to Agricultural Societies, from which I have quoted to some extent in this report. The Executive approved of this report, and suggested that the attention of the Societies be called to the following subjects for discussion :—

The advisability of establishing a Provincial Register for the registering of pure-bred farm animals, with a standard similar to the Canadian and American Herd Books; and

The question of how to make the School of Agriculture at Truro more efficient.

As I am one of the Executive, it may not be out of place for me to say a few words with reference to that body. It may not be good policy on my part, but I must say that, in my opinion, the Executive, for the amount of actual work done, has expended a rather large portion of the funds of the Association. But it must be borne in mind that our Association has been in a necessarily crude and formative condition, and also that circumstances (the consideration of the Exhibition matter, for example, which required our meeting twice with the Halifax City Council) necessitated more meetings than will probably be held during a similar period in the future. I believe, from my acquaintance with the Executive, that its members have honestly tried to do their duty, and have used every effort to further the interests of the Association.

This Association, I am convinced, is destined to prove a most important factor in the advancement of agriculture in this Province, and a potent aid in educating our farmers. We all need more

knowledge in our profession, and an Association of this kind is one of the best and cheapest means for the dissemination of that knowledge, by the opportunity for the interchange of thought and experience which it affords.

I am very glad to see so many in attendance here to-day, and I believe the number will be increased at the subsequent sessions. It is especially encouraging for me personally to know that this Convention is going to be a success. Few people know the amount of labor involved in preparing for a meeting of this kind. This work devolves almost wholly upon the Secretary, and rightly, too, because he is paid to do it. But apart from that, it gives me pleasure to know that my labor has not been in vain, for I believe I have the interests of this Association at heart, and have been actuated as much by the desire to faithfully discharge the duties of my office as for the monetary considerations attached to it.

I wish to take this opportunity to thank the gentlemen who have so kindly responded to my request to take part in the programme of this meeting, and I feel sure that with the bill of fare before us, we shall have an interesting and profitable Convention.

Respectfully submitted,

PAUL C. BLACK.

P. INNES, Coldbrook, said he would like to know why no report had been published before this. He thought it strange that this Association has been in existence for eighteen months, and no report of the work done has yet been given to the public. He had been informed that a large amount of money had been expended by the Executive, and he would like to know what had been done with the money. He objected to the adoption of the Secretary's report.

S. C. PARKER—"This discussion is out of order."

J. H. CAVANAGH, New Glasgow, moved that the Secretary's report be received and laid on the table until Thursday morning. Seconded by Wm. Corning, Yarmouth. Passed.

The Secretary, in reply to Mr. Innes, said that he had issued, on the order of the Executive, an advance report to agricultural societies last October.

Several delegates stated that their societies had not received this report ; but, as the majority of the delegates present had received them, these gentlemen must have forgotten about getting them, as a copy (and in some instances two or three copies) was mailed to every society in the province.

G. C. LAURENCE, Port Hastings, explained why eighteen months had elapsed between the formation of this Association and this the first regular annual meeting. The Association was formed in July, 1895, and, consequently, if the first annual meeting had been held at the end of a year, it would have been in July, 1896. It was thought best to hold the annual meeting in the month of January, as then farmers are better able to attend than in the summer, hence no annual meeting has been held till now. He moved that a committee be appointed to inspect delegates' certificates.

Moved and seconded that on Wednesday morning we consider, 1st, Delegates' Credentials ; 2nd, Secretary's Report ; 3rd, Treasurer's Report ; 4th, Report of Committees ; 5th, Election of Officers. Passed.

On motion, Messrs. Young and Laurence were appointed as a committee to inspect delegates' credentials, and report to-morrow morning.

F. L. FULLER, Manager of Government Farm, Truro, read the following paper :—

CARE AND APPLICATION OF MANURE.

By F. L. FULLER, MANAGER OF GOVERNMENT FARM, TRURO, N. S.

Successful farming depends on successful crop growing.

It does not require much calculation to prove that the farmer who raised the largest crop, will, other things being equal, make the most profit.

And right here we are tempted to make the seemingly rather inconsistent statement, that we believe that the farmer who raises the largest crops, "even though in so doing he has wasted more fertilizers than his rather cautious and economical neighbour," will come out best in the end. The counter-balancing advantage being the fact that for cost of *labour* he has produced his food very much *cheaper*. This is an item which we believe is rarely given its due consideration.

It is desirable, then, to grow large crops.

But our upland farms in this Province are at best only an Agricultural pie crust. Therefore if we are to get large yields, we must apply manure. Then the questions of where to obtain and how to apply these fertilizers, confront every farmer.

Of the twelve or more elements which are required for plant life, all are contained in the soil, in sufficient quantities, with the exception of Nitrogen, Phosphoric Acid and Potash.

These are termed the essential constituents of plant food.

They have a stated commercial value and can be obtained from different sources.

We believe that barnyard manure is, and will ever continue to be, the most important factor in enriching our farms. It is certain in its action. Its results are lasting. And it supplies food to the plant nearly similar in composition to the plant itself. Perhaps its greatest disadvantage is that it is bulky and rather expensive to handle. It is very largely affected by the food consumed, and as it costs no more to handle a ton of *rich* than a ton

of *poor* manure, it may be well to take a glance at the composition of some of our ordinary foods. For example, a ton of wheat bran contains about \$10.00 worth of these fertilizing ingredients. By careful experiments it has been computed that about 75 per cent. of the manurial constituents of the food consumed, is voided by the animals to which it has been fed. Thus, from a ton of wheat bran, "which now costs about \$12.50," we would have about \$7.50 worth of Fertilizing ingredients returned in the manure.

There are other foods, such as Malt sprouts, Cotton Seed Meal, etc which have equally high value in this respect. These are also foods which have a very high feeding value. Now it appears to me, when we take into consideration the two-fold value of these foods, that from a practical point of view it is a better investment to purchase food and keep stock than to expend large sums of money on commercial Fertilizers.

The question of how best to care for this important product is by no means a simple one. It is true that science has done very much of late to throw light on this important subject, and has given us some methods for the care and application of manure which would be almost perfection if they were only practical. Science tells us that the essential elements of plant food are very liable to waste, and that Nitrogen especially, the most expensive and yet at the same time the most fickle element in farm practice, from the time it is set free from the food in the process of digestion, is ever striving to outwit the farmer, to get clear of his grasp and into the air again.

But that if we carefully absorb all the liquid manure and mix it with the dry product and get it in contact with growing plants immediately, the loss is reduced to a minimum. This is all very well if it were only practical.

But as a matter of fact, here where the ground is frozen and covered with snow and ice for six months in the year this practice is out of the question, and we have to look for some method,

among those which are possible, of caring for our manure with the least possible loss until such time as we can apply it to our crops. Here is where science comes to our aid. But the question is so complex that it has never been worked out with entire satisfaction. Neither Chemist nor Mycologist has yet arrived at a knowledge of definite fixed principles upon which to base practical action.

Nevertheless, if we fail to avail ourselves of the practical lessons constantly brought before us, we should be effectually debarred from uttering a word of complaint against our profession on the ground that it does not pay.

Eminent scientific authorities have carefully computed the loss from manure kept under different conditions.

Prof. Roberts, of Cornell University, observed that horse manure piled up loosely for four or five months lost half of its manurial value. Cow manure, kept under the same conditions, suffered to the extent of 40 per cent. The same manure firmly packed, lost only 10 per cent. When we add to this, the loss from shrinkage in bulk, the total loss amounts to something enormous.

Volecker, in his elaborate experiments on fresh and rotted manures, observed losses varying from 26 to 60 per cent. of its original weight. Wolf records a loss of 54 per cent. in the case of an 80 ton heap of cow manure that was left for a year exposed to sun, wind and weather.

This loss he states was in no sense due to the evaporation of water, for in stating the matter in dry substance, he found that it had lost 66 per cent. of its original weight. We are also taught some valuable lessons with regard to the value of the solid and liquid excrements of animals.

We are told that if a ton of the solid excrements from the cow is worth \$1.60, a ton of the liquid is worth \$5.00, and that the plant food in the liquid is in a more available form, which still further enhances its value. But being more available, it is

more easily lost, and if the liquid is left unabsorbed for 24 hours, it loses one half of its original value.

The *fertilizing* ingredients in a ton of oat straw, which is one of the best absorbents which can be used for preserving this valuable liquid, is worth about \$2.60.

Yet, in the light of the above facts, some farmers will sell their straw for \$3.00 or \$4.00 per ton and bore holes in their stable floor in order that their cattle may be kept dry. These men may be found at the nearest grocery store, complaining about poor markets, while their sons are home throwing the solid manure through a window hole in the side of the barn where the water from the roof will have a good chance to wash the best part of even that away. Then they wonder why it is that these boys don't stay home and farm.

From what has been said about the waste of manure kept under the different conditions, and from what I have been able to learn of the practical means of preserving it, the conclusions to be drawn are.

1st—That the liquid should be absorbed as soon as possible and mixed with the solid.

2nd—That this mixture should not be left exposed to the weather.

3rd—That fermentation should be prevented as far as possible until the manure is applied to the soil.

The most practical way of complying with these conditions is to have perfectly water tight gutters, to use plenty of absorbents, and keep the manure in a shed or cellar with tight walls and bottom, and keep it thoroughly packed to prevent fermentation.

At the farm in Truro our manure is in the basement of a wing of the main barn. The floor and walls up to the ground level are cemented and made perfectly water tight. The bottom of the cellar inclines dropping at the back, at which point it is about three feet lower than the stable floor. Into this the liquid

from the gutters in the stable (which are also concrete) is conducted by means of an earthen drain pipe. The Solids are carried there in wheel barrows.

It might be agreed that if plenty of litter was used it would not be necessary to have the gutters drained into a tight cellar.

But the difficulty here appears to be due to the fact that absorbents will not take up their full quota of liquid, until they have been submerged for a time, as it were, which condition of affairs is not desirable in the stable.

We have a very good illustration of this in the fact that when we begin to fill our manure cellar, after it has been cleaned out, the liquid will accumulate in considerable quantity for a time. But as soon as the manure gets a sufficient depth, the liquid gradually disappears having been drawn up by capillary attraction. This reserve of liquid serves another good purpose.

Just as soon as the loose manure on the top of the heap begins to ferment, it naturally becomes more solid. It then immediately absorbs liquid and fermentation is checked.

The question of application of manure, although important, is by no means as serious as the preservation of it, for the reason that as soon as manure is applied to the soil in any manner the tendency to waste is very much diminished. But at the same time we would hail with pleasure any method for the application of this valuable product which has any advantages over the modes now in practice. A great many eminent agricultural writers have of late been advocating the system of spreading the manure on the surface as soon as possible after it is made, claiming that the valuable constituents being soluble would be carried down by the rain and retained in the soil.

This method has been received with considerable favour among farmers generally, and may have a great many points of merit. But we think it also has some disadvantages. One objection is that if it is applied after the ground is frozen, it will hold

the frost from five to ten days longer in the spring, and here, where our growing season is so short, this is an item of no small importance.

Further the loss observed by Wolff, in the case of the heap being exposed to the weather, would apply here in a much higher degree from the fact that so much more of the manure would be exposed to the elements. This question of application is even more complicated than that of preservation from the fact that such a variety of soils and so many different kinds of crops have to be taken into consideration. Just a glance at the principles which underlie plant growth might be interesting in this connection.

Plants, with few exceptions, take their food from the soil in solution, from different depths, according to the variety of the plant and the structure of the soil. Hence it is just as necessary that we have a sufficient quantity of moisture as it is that we supply the plant with food.

Now, if this water was supplied by rains during the growth of the plant, it would be a strong point in favour of surface application.

But as a matter of fact, the amount of water taken up by a growing crop, and the amount evaporated from the surface during its growth is far in excess of the rainfall during that period.

Hence we are obliged to look elsewhere for the supply of water for the growth of plants, and in so doing we find that it is drawn from the subsoil by capillary attraction.

Thus it will appear that the movement of the soil water during the growth of the crop is toward the surface and not downward.

From this we are forced to believe that the manure which is ploughed under has a far better chance of coming in contact with the plant roots in form of solution than that which has been applied to the surface. The movement of soil water is so closely connected with plant growth that the subject of Fertilizers can hardly be considered apart from it. But it would be unfair to ask your

further indulgence. Suffice it to say that the water is drawn from the subsoil by capillary attraction.

Obviously, then, anything which tends to put the soil in better condition and thus increases its power of drawing up moisture from the subsoil, is a benefit.

Here, again, we believe that burying has an advantage over surface application. There are other instances which might be quoted to favour the system of plowing under, such as manure fermenting in the soil and thus promoting the formation of Nitrates, etc.

But I will simply close by saying that, although there is no fixed scientific method for the care and application of this product, it is no excuse for following methods which we know are bad. And until some such fixed mode is adopted, we should all be found on the side with those who seek.

PROF. JAS. FLETCHER, Ottawa, was much pleased at Mr. Fuller's excellent paper. Mr. F. had spoken of "Science." Science means something practical.

GEO. B. MCGILL wanted some light on this manure question. Is it a good plan to draw out manure in the late fall and pile it in the field? Is there any waste by so doing?

MR. FULLER replied that if piled snugly in a good square pile, there was very little loss. What loss there was would be more in loss of milk than in plant food.

A FARMER said that farming is divided into two parts, growing crops and selling them. This subject of manure is one of the first and most important questions to be considered. He did not approve of plowing in manure. He wants it near the surface. He believes in buying grain foods to be fed on the farm for the purpose of adding fertility to the soil.

MR. OSGOOD, St. John, N. B., urged greater care to preserve the liquids in manure. The liquid represented more than half

the value of the manure. He advocated the use of land plaster or Kainit as absorbents. They retain the liquid and prevent the escape of the ammonia.

PROF. FLETCHER said where there was no manure cellar, the plan of making good square piles in the field was a good one.

P. INNES advised the spreading of manure as soon as made.

WM. YOUNG had tried this plan, but thought there was considerable loss, even on comparatively level land, by washing. He has a manure cellar under his stable, and mixes the manure with black mud, and finds it an excellent plan.

GEO. B. MCGILL said he did not believe that land plaster, or Kainit either, had any power to fix or retain the ammonia in manure.

J. RUFUS STARR had used gypsum, or land plaster, and it had certainly stopped fermentation, in his horse-stable especially.

M. G. DEWOLFE wished to ask Mr. Fuller what was the manurial value of bran.

MR. FULLER replied, ten dollars per ton. Cotton-seed meal is richest in plant food. Linseed meal next.

J. H. CAVANAGH said that actual experiments on the farm were needed to determine the accuracy of these theories as to the manurial value of certain feeds. He would like to hear Mr. Geo. Forrest, Superintendent of the Experimental Farm at Nappan, speak on this subject, as a practical farmer.

MR. FORREST said the sooner we get the manure on the land the better. He does not use gypsum, but uses horse manure in the gutters behind the cattle. The successful farmer is the man who uses his common sense in feeding his stock, caring for the manure, and applying it to the land.

Some further discussion ensued as to the power of plaster to fix ammonia, the general consensus of opinion being that plaster

is of benefit, arresting fermentation and consequent loss of ammonia.

The meeting adjourned until this evening.

EVENING SESSION, Jan. 26th, 1897.

Meeting called to order at 7.30 p. m., President McKay in the chair. The advance report of the Secretary, issued last October, was read.

PROF. JAS. FLETCHER, of the Central Experimental Farm, Ottawa, was then called upon, and delivered a very interesting address on

FODDER PLANTS.

This subject of Fodder Plants is one of very great importance to the farmer. True grasses include the small grains and Clovers. Indian Corn is a true grass, and all such plants as broadleaf Sedges, Rushes, etc., are grasses. The much-lauded Sacalin, or Saghaline, is a true grass. Sacalin is valueless as a fodder plant; it is not succulent, and cattle will not eat it willingly. It is a humbug as a food for stock. Its only value is as an ornamental plant. It grows about three feet high.

One of the most important grasses is Timothy. This grass has an artificial value; that is, it may be sold for cash. But it is not so valuable for feeding as some other grasses. We want that grass which will give us the most profit, and we also want those grasses which will do best in one particular locality.

The *best* grass must, 1st, Be hardy; 2nd, Nutritious; 3rd, It must give quantity, and 4th, It must be palatable.

In Canada there are 300 varieties of wild grasses. Many of these are very rare, and many are useless. June grass is the most useful dairy grass. Every grass has its own locality in which it thrives best, and we have to find out just which grasses suit our

own locality best. This is done by experiment. The Professor here described the experiments with grasses in plots of one square rod for each kind now being carried on at Ottawa.

The time of cutting is very important. This is after the flowers have fallen, and the seeds are beginning to form. But be careful to cut before the seed ripens.

In selecting a mixture of grasses to be sown together, get those varieties which flower at about the same time. (The Professor here told how to get information on any subject from the Experimental Farm at Ottawa. Letters addressed to any of the staff may be sent free of postage, and will receive careful attention.)

Austrian Brome Grass (not Hungarian, which is not particularly valuable) is a very valuable grass, particularly in the Northwest. It is very resistant to drouth, is very succulent, and is a free producer of seed.

Orchard Grass is one of the most desirable varieties, but one objection to it is, that it is apt to grow bunchy.

Meadow Fescue and Tall Fescue are excellent hay grasses, and will do well here in this province.

Orchard Grass, hy-the-way, should be cut very early.

Clover and Timothy, when grown together, are at their best about ten days apart, and you, therefore, lose part of the value of one or the other. Clover and Orchard Grass are a better mixture, as they mature nearer together.

Timothy has become popular by reason, 1st, of its clean appearance; 2nd, It packs easily—presses well. But it doesn't give much aftermath.

What constitutes a good hay grass? One which gives a large weight per acre, and has plenty of leaves from bottom to top.

Couch grass is easy to get rid of, as its roots only penetrate about four inches below the surface. *Shallow* ploughing and thorough harrowing will kill it. Deep ploughing will only replant

it. Awnless Brome Grass is harder to get rid of, as it roots much deeper. This latter grass is good for land which is not easily worked. It will grow on the alkali lands of the West, as well as on our richest soils.

Orchard Grass makes light hay, but is very nutritious. The Irish feed their hunters on it.

A good mixture of grasses is one which will give us the largest crop,—be as thick as possible from top to bottom, and be composed of varieties which flower at about the same time.

Sweet Vernal is a very valuable grass. It is this grass which gives the sweet aroma to our English hay. If Crimson Clover can be grown here in Nova Scotia (as was stated the other day at the Fruitgrowers' meeting at Wolfville), you can grow Sweet Vernal all right. A good mixture is made up as follows:—6 lbs. Timothy, 4 lbs. Meadow Fescue, 2 lbs. Orchard Grass, 1 lb. June grass. To this add 2 lbs. Mammoth Red Clover, 2 lbs. Alsike, 2 lbs. Alfalfa (Lucerne); 2 lbs. White Dutch—the last not for marsh lands.

Meadow Foxtail is a troublesome grass on your marshes, but is valuable at Ottawa. This and Meadow Oat Grass are the earliest varieties in Ontario. Many weed seeds occur in imported grass seeds.

W. SAXBY BLAIR asked if Awnless Brome Grass would be valuable for our marsh lands, and which was the more exhaustive, it or Timothy.

ANSWER BY PROF. FLETCHER—Yes. As to exhaustiveness, they are about the same. Timothy feeds nearer the surface.

"What about Red Top?" It is a soft grass. Mixed with June grass, it makes a good hay.

Perennial Rye Grass is likely to be a very valuable grass in Nova Scotia. It will not grow in Ontario. It ought to be worth trying. In Scotland it does remarkably well on the sewage farms outside of Glasgow and other cities.

In answer to a question from Mr. Innes: Sweet Clover is a good bee plant; is good for hay if cut young. It is a biennial, but is not so valuable for bees as the ordinary Red Clover.

M. W. DEWOLFE—Are Vetches or Tares good for hay?

ANSWER—Yes; but hard to cure, I fancy.

J. RUFUS STARR thought Alfalfa would do well on the sandy soils in this valley.

PROF. FLETCHER—Ten cents for seed would cover the cost of the experiment.

QUESTION—Would it be profitable to allow Vetches to mature pods and thresh?

ANSWER—Yes, I should think so. This is the practice in the south of England.

S. C. PARKER next read a paper on

HOW TO MAKE THE FARM PAY.

BY S. C. PARKER, BERWICK, N. S.

Mr. President, Ladies and Gentlemen:—

You will notice in the choice of a subject, I am given an exceedingly broad field. A full discussion of this subject would cover the entire economics of Agriculture and Horticulture, and it is to learn something along this line that this large audience is assembled here to-night. I, of course, do not propose to attempt any full discussion, but will only touch briefly on a few of the points that have come to my mind, some of which, at least, are not usually considered factors in the question at issue. I have an idea that the farm should pay in more than one way, that large production, great orchards, a mortgage on your neighbor's farm, or even a snug bank account are not after all the chief end of man; and that the farm which does not provide a comfortable and happy home, aid in developing social life, and in promoting

everything that tends to make life profitable, does not pay in the truest and best sense of the word.

It is said of the Western farmer that he grows corn, to feed hogs, to buy land, to grow more corn, to feed more hogs, to buy more land, and I think investigation will go to show that many of our farmers are land poor, fencing and paying taxes, scattering manure and labor over broad acres, when one half or one third of the quantity carefully tilled and more abundantly fertilized would yield a more satisfactory return. Too many of our farmers are

"Rich in broad acres and half-tilled fields,
And yet so pinched and bare and comfortless,
The veriest straggler limping on his round,
The sun and air his sole inheritance;
Shrugs his shoulders in self-complacency,
And laughs at a poverty that pays its taxes."

I would suggest as one means of making the farm pay, a more intensive system of farming; less acres worked and more thorough cultivation, more abundant fertilization, and more scientific methods.

But, Mr. President, some one may say, does not the farm already pay? I would answer yes, farming does pay. You will pardon me if I speak from the stand point of an Annapolis Valley farmer, for it is here, of course, I am the more intimately acquainted with the methods and practices of farming. I say farming does pay in this Valley—it must pay—for I will challenge the world to show a strictly agricultural section of country where the people live so peacefully and enjoy so many of the comforts and even luxuries of life, with a moderate amount of labor as in this region. I will challenge the world to show a section of country which in proportion to its population imports so much and produces so little. Look, for a moment, at the imports of this valley. We import all our flour, carload upon carload of cornmeal, oats, and other feed; we import everything we wear to cover our nakedness, fertilizers in immense quantity, agricultural implements, furniture and carpets,

pianos, organs and sewing machines, top buggies and road carts, and the bicycle will soon be as common on the farm as farmers' boys and girls. We import oil, canned meat and fish; tea, sugar and molasses. But you may say these are essentials, we do not produce such things; perhaps they are, but inquire at the nearest grocery and you will find Ontario beans, Bermuda onions, bottles of pickles, canned beans, peas, and tomatoes, imported cheese and even canned apples in this, the banner apple growing country of the world, while one firm in Halifax imports from Ontario \$50,000 worth of butter annually. Some of you may remember that a few years ago, when a deputation of Canadian farmers approached Sir Richard Cartwright asking for certain concessions, he told them they "must work more and eat less." Now I would differ from Sir Richard in this as in some other points, perhaps we may work more but we need not eat or have less. Let us look to greater production at a less cost as a first remedy.

You are well aware of the keen competition in every department of business, and the profits to-day are to the careful, progressive, thorough worker. I would not look to Governments for improvement of our condition. Unlike many men, I do not think the Government can change our condition to any great extent. We are too apt to lay our ills at the door of the Government or Providence when we do not improve the blessings which lie at our hand. I was in Lunenburg County sometime ago—before the late change in Government—and I fell in with an old farmer, who was bemoaning his lot and complaining of hard times, and laying all his ills on the Government. "A change of Government," he said, "was what the country needed." I asked him which government was at fault, the Tory at Ottawa or the Grit at Halifax. "Oh" he said "he did not know, but d—n the Government any way."

To make the farm pay we need to *produce more*. In the past ten years every energy has been put forth to increase the production of apples. This is right. The apple is the best paying farm

product in Nova Scotia, but is there not abundance of room, with the expenditure of a little energy and a small amount of capital, to produce many things we now import and to save much that now goes to waste? I will speak of a few; beans, for instance. How many farmers are there here who by just a little extra effort could grow an acre of beans yearly and produce 25 to 50 bushels, and have a cash crop worth \$50 to \$100 in our home markets? Take vinegar, how many bushels of apples are yearly wasted, or worse than wasted, by being made into cider for the farmer and his boys to drink, that if properly managed could be made into cider vinegar, and displace the acetic acid stuff that is generally used?

In the poultry business there are great possibilities; turkey and goose to-day are worth 12c. per pound, pork and beef are worth 4c. or 5c. Mr. Goodacre will tell you a pound of poultry can be made about as cheaply as a pound of beef.

In the dairy business there is abundant room for development. The Wolfville Creamery is now taking in 12 tons of milk, making about 1,000 lbs. of butter each week, distributing \$1,000 per month among the farmers of that community, and these people do not raise any the less apples, but are yearly increasing their orchards and enriching their farms by this method. The Farmington factory near here can tell a similar story, while the other four or five creameries in the Valley are eking out a meagre existence or standing with closed doors.

In sheep-raising there is an ample field for development, and one whose possibilities are as yet only touched upon. These mountains to the north and south, with their sunny slopes, fine pasturage and abundant water, should, and will by-and-by, be the grazing ground of thousands of sheep and lambs; and with cold storage in warehouses and steamships, the product can be safely carried to the English market. Why should we beg for free trade with our great neighbor, or base our hopes of financial salvation on the commercial attitude of our selfish southern cousins, when

modern appliances place the greatest markets of the world at our doors?

Again, Mr. President, there is another way in which our farms can be made to pay; if not in dollars, at least in home pleasures, by making our farms attractive. A cheap way of adding much to the value of every farm is by the encouragement of ornamental tree planting. If every farmer in the country would spend only one day each year in planting and caring for ornamental trees on his own property, in twenty years our country roads would be bowers of beauty, and hundreds, and often thousands, of dollars would be added to the value of every farm in the land. Let us do away with the bleak and barren homesteads

"Where no flower
"Told that spring had come, but evil weeds,
"Night-shade and rough-leaved burdock, in the place
"Of the sweet doorway greeting of the rose
"And honeysuckle, where the house walls seemed
"Blistering in sun, without a tree or vine
"To cast the tremulous shadows of its leaves
"Across the curtainless windows, from whose panes
"Fluttered the signal rags of shiftlessness.
"Not such should be the homesteads of a land,
"Where whoso wisely wills and acts may dwell
"As king and law-giver in broad aced state,
"With beauty, art, task, culture, books, to make
"His hour of leisure richer than a life
"Of four-score, to the baron of old time.
"Our yeoman should be equal to his home,
"Set in the fair green valley purple walled,
"A man to match his mountains, not to creep,
"Dwarfed, abused below them."

I will assert, and am prepared to maintain this point, that there is nothing for a man who owns even an acre of land that will so enhance the value of his property as setting ornamental trees. What man is there in the hall with ornamental trees growing on his property who can place sufficient value on them? Any-

thing else you can price, trees you cannot, money cannot buy them.

Again, Mr. President, how shall we know when our farms do pay? Simply as business men do, by keeping an exact account of receipts and expenditure. Farming must be a paying business to afford a living in the haphazard, slipshod manner in which it is commonly pursued. Every farmer should know at the end of each year how his farm is paying. No elaborate system of book-keeping is needed; any man who can read and write can do the necessary clerical work, and a very few moments expended each day will show us at the end of each year how we stand financially. At present the average farmer can only, by looking back on a term of years, decide whether he is gaining or losing ground, and often when too late he finds that the balance is on the wrong side.

At the very foundation of our efforts to make the farm pay, I would place *economy*, not only of time and money, but of all the requisites of farm work; we must look carefully after the leaks. Mr. Fuller told us to-day of the great waste from not properly caring for the farm manure, and there are many other leakages in our farm economy that should be carefully looked to.

Perhaps, more than anything else, we need more *energy*, more *enterprise*, and more *perseverance* to make the farm pay; with these the barren places may be made glad, and the desert to bloom and blossom like the rose. To make the farm pay we need *organization*, not for offensive, but defensive warfare. This is a day of combinations; every other business and profession is organized; the farmer alone, of all men, fights the battle of life single-handed. There are a hundred crying evils that co-operation would remedy. Success in many things is gained only by mutual assistance. To make the farm pay the farmer needs *education*, practical, thorough, experimental, in the line of his profession. The Dominion Government have experimental farms here and there through Canada, doing what they can to advance our interests and supply our needs; added to these, the fruit growers of the Annapolis Valley need an

experimental fruit station, in a central point, to advance our best interests.

I have in this hurried manner run over a number of points to which scores might be added. My principal object is to provoke discussion, and cause some farmer here to think out some new ideas whereby his farm can be made to pay more bountifully.

In discussing this excellent paper, Messrs. Osgoode and DeWolfe endorsed the writer's remarks on the great importance of making the farm home and its surroundings more attractive, and thus inducing our boys and girls to stay at home.

J. RUFUS STARR—We have got to change our methods here in this valley if we wish to make the farm pay. We must produce more, and buy less. We are not likely to see again the high prices of former years for potatoes and apples.

E. B. ELDERKIN, Amherst—More intelligent farming is needed to-day. We want more brains and less work.

WM. YOUNG—My experience has been that work, and more of it, is necessary—at least in Kings County—in order to make the farm pay. The Cheese Factories and Creameries of this valley ought to be connected with this Association. We should get Prof. Robertson, the Dairy Commissioner, to come down here and do for us what he has done for Prince Edward Island. He has the knowledge and experience, while the directors of most of our factories have neither. The dairy industry should be organized and the product made more uniform. If this were done, the business would be more profitable. The professors from Ottawa should come down here in the spring and inspect our orchards, and tell us what is needed to be done to make them more profitable.

P. INNES said we hadn't the same resources for the production of milk here as they have in P. E. Island. Bad management of our factories has conduced to their non-success. In P. E.

Island he understood Prof. Robertson had run the factories for the farmers.

GEO. FORREST—His supervision ended in 1895.

GEO. B. MCGILL said that orcharding and dairying went well together, as one supplemented the other.

The next feature on the programme was an address from the Middleton Board of Trade, read by the President.

Mr. President, Ladies and Gentlemen:—

As President of the Board of Trade for the Town of Middleton, I have been requested to present an address of welcome to the farmers now assembled in their Farmers' Association. I scarcely need say that an address is out of my line of business; but, in behalf of the Board of Trade and citizens of Middleton, I most cordially welcome you in our midst.

We fully appreciate the important bearing the agricultural interests have upon the general trade relations of the country; and we merchants believe that when the farmer and merchant keep in close touch with each other, the prosperity of both is more fully assured. Our interests are closely related. The success of trade depends in no small degree upon the success of the farmer.

We note with pleasure the increased intelligence manifested in agricultural communities, and the interest taken in agricultural education. As a consequence of which, it is beyond question that the farmers of our province are destined to exercise a still greater influence in all the business relations of the country. There is no industry in which the introduction of improved methods is more apparent than the agricultural industry.

A less inclement season would have afforded you a better opportunity to see the many beautiful attractions of our valley, but we hope this is but the first of many meetings of the Farmers' Association we shall have the pleasure of welcoming to our town.

We again most cordially bid you welcome, and may your session here be as profitable to yourselves as it is entertaining and instructive to us. I regret that the Board of Trade has not made a better selection than myself to express the good will of our townfolk towards you. We hope you may carry away some pleasant recollections of us.

H. E. REID,
President Middleton Board of Trade.

This address was suitably replied to by G. C. Laurence.

Wm. Corning moved that Mr. Parker's paper be published in the Coöperative Farmer, seconded by Saxby Blair. Passed.

The meeting adjourned at 10 p. m.

SECOND DAY, MORNING SESSION, JAN. 27TH, 1897.

Meeting opened at 10 o'clock. Owing to the sudden illness of the President, the chair was taken by S. C. Parker, 1st Vice-President.

The matter of delegates' credentials was first taken up. There seemed to be some misunderstanding among delegates as to these credentials, some of them not having any. As there is nothing in the Act requiring these credentials, the Chair ruled that all delegates from Agricultural Societies should be received whether having regularly signed certificates or not.

Moved and seconded that the Secretary's Report be adopted. Carried.

WM. YOUNG then read the Auditors' Report. After some discussion, a committee composed of Messrs. P. Innes, C. G. Godfrey and C. H. Bryan was appointed to examine the accounts and report at the close of this evening's session.

A discussion ensued as to the wisdom of the Government in providing for a yearly Exhibition at Halifax.

C. H. CAVANAGH took exception to the manner in which the Exhibition Commission had been conducting affairs.

WM. LACY, Annapolis, moved the following resolution :—

“Resolved,—That this Association heartily confirms the action of the Local Government in providing for an annual Exhibition at Halifax.”

MR. LACY stated that his Agricultural Society wants the grant continued to County Exhibitions every year.

HUGH FRASER, Elmsdale, took exception to the action of the Government in providing for an annual Provincial Exhibition.

MR. MACDONALD, Shubenacadie, ably defended the locating of the Exhibition at Halifax.

WM. CORNING, Yarmouth, asked that Mr. Lacy's resolution be accepted.

J. H. CAVANAGH moved that the matter of grants to County Exhibitions be referred to a committee which should report at a later stage.

J. V. THOMAS, Bear River, said his county, while in favor of holding the annual Exhibition at Halifax, was too far off the road to be benefited.

J. H. CAVANAGH moved in amendment that this matter of County Exhibitions be referred to a committee of five, who shall report on Thursday morning. Seconded by Wm. Young.

P. INNES moved in amendment that the grant to County Exhibitions be made annual. Seconded by M. G. DeWolfe.

Moved in amendment, and seconded, that this resolution be deferred three months. Carried. 23 for, 18 against.

Meeting adjourned for dinner.

AFTERNOON SESSION.

Meeting convened at 2 o'clock, Acting President Parker in the chair.

PETER INNES, Coldbrook, read a paper on

ARE OUR FARMERS READY FOR CO-OPERATIVE JOINT STOCK ENTERPRISE ?

BY P. INNES, ESQ., COLDBROOK.

Mr. President and Gentlemen :—

I have thought the time not inopportune, and this meeting not inappropriate for offering some observations on the subject of combinations among our farmers for the purpose of advancing their interests, fostering and developing their industries, and securing to themselves and for themselves the best possible results and the largest possible rewards, as the legitimate fruits of their labors. Such combinations,—such associations of capital and labor have operated successfully and with encouraging results elsewhere ; and in these days of rapid transit and world-wide competition, it is assuredly worth our while to consider whether the co-operative principle can not be applied with advantage to some of our industries.

By reason of circumstances which brought me into contact with considerable numbers of our farmers up and down the valley during the past month or two, my attention has been somewhat especially directed to this subject, and it occurred to me that the conclusions resulting from my experience and observation might not be uninteresting at this time. Accordingly, I propose to consider the question :—"Are Our Farmers Ready for Co-operative Joint Stock Enterprise ?" And I shall be pleased if the raising of the question will lead to instructive discussion.

As this is somewhat of a double-barrelled question, embracing two distinct, but not necessarily separate or conflicting, forms of

modern enterprise, it will be convenient at the outset briefly to define the respective aims and spheres of operation of Co-operative and Joint Stock Company undertakings.

CO-OPERATION.

In social economics, co-operation is the association together of any number of persons having interests in common for their joint advantage and gain. Its inherent fundamental principles are that its operations shall be mutual and for the general good, and that its advantages shall be equally distributed, and its profits equitably divided among the co-operators. Co-operation may take, and has taken, a great variety of forms, and is elastic enough to adapt itself, with modifications, to a great variety of conditions and circumstances. Speaking generally, however, most, if not all, of its forms of operation may be classified under three main heads.

First.—Association for the purchase and distribution of articles of consumption. This class, of which our grange societies are a familiar example, has attained the largest proportions and the greatest success in Great Britain.

Second.—Association for the production of commodities. France stands foremost in this class of industries, which have also made great progress in Belgium. Cheese Factories and Creameries may be cited as illustrations in our own country.

Third.—Association for mutual borrowing and lending. Germany stands easily at the head of this form of co-operation with Italy as a good second. These "People's Banks," which are instituted for the purpose of borrowing and lending and affording mutual credit and support between and amongst its members, have spread extensively, and been attended with eminent success in these countries. To a certain extent, and with necessary modifications, our Mutual Building Societies represent this form of co-operation.

Co-operation, as an effective factor in social and industrial

economics, is a distinctly and strikingly suggestive modern development, dating from 1844 in England, and from 1849 in Germany. Its growth, extension and success have been steady and marked, and, in one or all of its various forms, it has attained a firm foothold amongst all civilized peoples.

JOINT STOCK ENTERPRISES.

Joint Stock enterprise may be defined, in a general way, as the application of associated capital to the founding, carrying on and developing any financial, commercial, or industrial undertaking. Although its operations are conducted for the behoof of the whole body of shareholders, its underlying and motive principle is not so much mutual benefit as individual gain. As compared with purely Co-operative Associations, Joint Stock Companies are to be looked upon rather as convenient vehicles for individual investments, each shareholder contributing so much money, more or less, according to his belief in the *bona fides* and earning capacity of the particular enterprise. He need not necessarily know anything about the nature of the business, or the proper method of conducting it, nor personally assist in carrying it on; and he is not at all concerned about his fellow shareholders as a rule, whom indeed he may not even know. His responsibility is limited to the number of shares he holds, and his interest is limited to his individual gain, whether as dividend earned, or as increased saleable value of his stock. Associated capital in the form of Joint Stock Companies, especially since the adoption of the principle of limited liability in 1855, and the simplification of the law in 1862, notwithstanding that its initial motive is individual gain, and that its operations have been attended with a great abuse and scandal and much dishonest speculation, has nevertheless, by reason of its flexibility and adaptability to circumstances, been one of the greatest and most successful agents in the development of the resources, commerce and industries of the world.

Under the existing law, any number of persons, (in Canada,

I believe, not less than three), may combine together to carry on any lawful business, and be incorporated as a limited Joint Stock Company, either by a special act, or by registration, or by letters patent under the general Companies Act. The liability of each shareholder is limited to the par value of the shares subscribed for or held by him, and the stock is personal property, and may be sold and transferred at any time.

The affairs of the Company are managed by a Board of Directors, elected by the shareholders, and by such officials as the directors may appoint; and the conduct of affairs must be in accordance with the law and the rules and regulations adopted by the company in general meeting.

COMBINED CO-OPERATIVE AND JOINT STOCK ENTERPRISE.

Another form of enterprise is that in which certain features of Co-operation are happily combined with Joint Stock methods.

For instance, a number of persons engaged in the production of any particular commodity may co-operate for their mutual advantage, and as it were pool their individual products; and then these are handled, manufactured and disposed of through what may be termed the mechanism of joint stock methods. The producers of the raw material need not necessarily be partakers in the joint stock part of the undertaking, but it is desirable they should be, and in fact they generally are, in order to ensure a steady and regular supply of the commodity, and in order also that they may share in the entire ultimate profits. The contributor of funds for shares in the joint stock part of the undertaking need not necessarily be a producer, but his money may be as necessary to the success of the enterprise as the commodity of the producer. In all undertakings where the principles of co-operation and joint stock operation are combined it is most desirable to prevent anything like conflicting interests, that the producer and the investor should be one and the same person. This form of co-operative association is peculiarly adapted to certain agricultural

products, and is largely taken advantage of elsewhere. Cheese Factories and Creameries, and particularly the proposed Apple Shipping Company, are illustrations of this form of combination.

CONDITIONS NECESSARY TO SUCCESS.

Having thus stated in a general way what may be termed the internal economy and principles, I will now briefly indicate the external conditions and circumstances which are essential to the success of Co-operative Joint Stock enterprises. These are:—

First—What has been aptly termed “social efficiency,” that is to say, the community amongst whom an undertaking is proposed to be established in which they are to participate must be sufficiently intelligent to judge of the merits and appreciate the advantages of the proposal; sufficiently enterprising to support it to the full measure of its and their capacity; and sufficiently public spirited to stand by it, and each other, and honorably fulfil their mutual obligations.

Second—The circumstances must be favorable. That is, the soil and climate must be suitable to the production of the particular commodity in view, the locality must be within profitable distance of a steady and regular market, and the transit facilities should be good. The commodity must be produced in sufficient quantity and of the desired standard quality, and it must be produced cheaply enough to admit of its being manufactured and marketed at a cost which will leave a clear margin of profit.

Third—The capital must be sufficient. In addition to the fixed capital in land, buildings, machinery, plant, etc., there must be ample floating or working capital to enable the ordinary business of the undertaking to be carried on efficiently, without delay or embarrassment.

Fourth—Efficient and honest management. It seems scarcely necessary to say that even if all the preceding conditions are fully satisfied they may go for naught, and the most promising enterprise may be wrecked for lack of competent and honest

management. The most able, experienced and trustworthy man, or men, that can be got should be in charge; and, within necessary limits and under proper supervision, he, or they, should be allowed a free hand. Favoritism should not be tolerated on any pretext.

ARE OUR FARMERS READY FOR THIS CLASS OF ENTERPRISE.

Having laid the foundation for my subject by stating (1) the general principles which underlie, and (2) the conditions which are essential to the success of Co-operative Joint Stock enterprise, I am now in a position to consider the question as to whether, and to what extent, farmers are ready to utilize the undoubted advantages of this class of undertaking.

Various spasmodic attempts have been made at different times and in different localities to induce our farmers to enter into combinations for specific purposes, but unfortunately the results hitherto, speaking generally, have not been successful or even encouraging.

Inasmuch as the co-operative principle is unquestionably sound, and its practical application elsewhere has been demonstrably satisfactory and profitable, it is obviously worth our while to give the matter closer consideration, and endeavor to ascertain the causes which have led to our non-success in Nova Scotia. We should take stock of ourselves and of our circumstances and surroundings, in order that we may clearly comprehend our capabilities and limitations, and recognize what is within the compass of our attainment and what is beyond it.

And first of all, as to ourselves. I am somewhat afraid that we are not up to the mark that our average standard of "social efficiency" is somewhat behindhand, and that our conception of mutual interdependence and community of interest is not very clear or abiding. I am afraid we are somewhat lacking in the essential feature of mutual cohesiveness, and that we do not always stand as loyally, honestly, and honorably by one another as could be desired. In short are we not rather inclined to be

suspicious one of another ; and to be as it were on the *qui vive* to see that our neighbor does not get surreptitiously ahead of us ? Are we not rather constitutionally slow to move, and when any new enterprise is afoot is it not rather a weakness of ours to stand around, looking on and adversely criticising it, rather than putting our hands in our pockets and our shoulders to the wheel to help it along ? When any new project is being advocated the point upon which our attention is liable to fix is not so much the merit of the proposal as, "What is he going to make out of it ? What sort of axe has he got to grind now ?" I think it must be admitted that our general, if not invariable, attitude towards new ventures is one of mistrust ; and this suspicious attitude is due, in my opinion, not so much to lack of intelligence, appreciation, or interest, as to the fact that we have been so often victimized and made the prey of the spoiler, and that so many of our enterprises have ended in disaster and loss. Admitting this, however, to the fullest extent, there still appears to be a residuum of blame which attaches to ourselves, principally by reason of the lukewarmness of our support, and the inadequacy of our supervision and management. Take for instances our Grange Societies, Supply Associations and Farmers' Clubs, which are examples of the simplest and easiest form of Co-operation, consisting merely in the purchase and distribution of commodities. Now, all such Societies of which I have any cognizance, with possibly one exception, have either died a natural death or are in the throes of dissolution, chiefly from incompetent management and inadequate capital.

WHAT ONTARIO IS DOING.

I have already stated the four cardinal requirements necessary to the success of Co-operative Joint Stock Enterprises, viz., "social efficiency, favorable circumstances, sufficient capital, and competent and honest management." I find Ontario pretty well fills the bill in her cheese factories and creameries, and the result is astonishing. The Dairymen's and Creameries' Conventions of

Ontario have been held recently at Brockville and St. Mary's, respectively; and, while I do not propose to weary you with statistics, some figures submitted at these meetings may be interesting and suggestive. As regards cheese making, which is comparatively an old, though really a young, industry, the returns on the exports for 1895 were \$10,269,000, and for 1896, \$11,652,000, or an increase for last year of close upon one and one-half million of dollars. This is on cheese alone. Creameries are of recent introduction, and many of them are yet in their experimental stage, but the President was able to say in his report: "If care is exercised, there is no reason why next season's exports may not be almost trebled, as they have this. The returns to the farmer from butter represent almost \$1,890,000 this year as against \$853,384 in 1895. This increase of more than a million dollars is certainly remarkable. Yet our shipments this year are only a drop in the bucket when considered alongside the \$40,000,000 worth that Great Britain annually imports."

PRINCE EDWARD ISLAND.

Coming nearer home we have another instance of success in the cheese and butter industries of Prince Edward Island. The farmers there found themselves wanting in one of the requirements necessary to success; competent management. They raised the capital, built the factories and creameries and supplied the milk; but wisely decided to put the management into the competent hands of the Dairy Commissioner, Prof. Robertson. In 1895 there was only one dairy station on the Island. In 1896 there were twenty-eight Cheese factories, and two Creameries. As late as 1893 butter was imported into the Island from Ontario. They will have for export 300,000 lbs. winter made creamery butter this winter. In 1892 506 boxes of cheese were exported, and in 1895 25,000 boxes of 70 lbs. each, representing, I take it, well on for one hundred and fifty thousand dollars.

NOVA SCOTIA.

I can find no report of the output of the 45 to 50 Creameries and Cheese factories in Nova Scotia, but I am under the impression, that they do not produce sufficient butter to supply the consumption of the Province, and a very little cheese for export ; and this because they are wanting in one or all of the requirements I have mentioned as necessary to success, and are, as a rule, eking out an unprofitable existence which is anything but encouraging to our farmers. We should take into serious consideration, and prepare for the development of, our Dairy industry if we are to keep up with our neighbors, and realize the full benefit of our natural conditions. Instead of lagging in the rear, Nova Scotia, with her combined Dairy and Apple industries properly developed and organized, should lead the van.

THE APPLE INDUSTRY.

The apple industry is now ready made to our hands, and all its main conditions are peculiarly, even exceptionally favorable to its profitable transportation and marketing by means of Co-operative joint stock enterprise. In the first place, our natural advantages are unexcelled. Soil and climate combine to produce fruit in abundance, of excellent quality. In the second place, our area is limited and everywhere touches the seaboard, so that we have no long land transport. In the third place, our seaports are nearer to the British and European markets than those that are available to any of our competitors on the continent. In the fourth place, our production has reached important proportions and is steadily increasing. The yield for the present year will have been something like 500,000 barrels, and our expert authorities compute that the quantity will have doubled within the next ten years. In view of these indisputable facts and circumstances, which lie upon the surface and stare us in the face, I am amply justified in saying that no more splendid opportunity ever occurred anywhere for the formation of a Co-operative Joint Stock Company, nor one

that offered more assured promise of advantage and profit to our farmers and fruit growers. If we are alive to our own interests, to the progress of events and the tendencies of the times, and to what is being done and projected by our competitors, we will lose no time in mutually associating and heartily co-operating to carry the proposal for the organization of "The Nova Scotia Apple and Produce Shipping Company, Ltd." to a successful issue.

THE APPLE SHIPPING COMPANY.

As the project has recently been somewhat prominently before us at public meetings and in the press, it will not be necessary for me now to do more than give a brief outline of its principal features. The proposal is to form a Company with a capital of \$50,000 in shares of \$10,00 each for the purpose of carrying on a general warehousing, shipping, marketing and agency business in apples. As the project is conceived wholly and fundamentally in their interest, it is hoped the shares will be taken up by our farmers and fruit growers.

This should not surely be a difficult matter for us in view of the fact that by the lowest computation \$100,000 a year are being unnecessarily lost to us under existing circumstances. I have little doubt that the Capital would be readily subscribed outside, but that would be of little or no advantage to us, because in that case the business would be managed and the company operated not in our interests, but entirely in the interests and to the profit of the shareholders.

Among the objects which the company proposes to effect are:

First—The construction or acquisition of apple warehouses at convenient centres connected with the railway by sidings, for the storing, assorting and shipping of apples.

Second—The regulation of shipments in accordance with the demands, supplies and prospects of the markets, and the avoidance of the necessity for rushing and sacrificing apples on a glutted market.

Third—The transportation of apples in properly equipped and ventilated steamers from and to any suitable ports either on this or the other side.

Fourth—The appointment of reputable and responsible persons or firms to act as the Company's agent in the respective markets, to whom its consignments shall be exclusively made.

Among the results that will accrue from the operations of the Company are :

First—Reduced transportation charges. It is obvious that the concentration and control of the crop will enable the Company to secure the utmost possible advantage of competitive rates.

Second—Abolition of middlemen's tolls. As the producer will ship directly to the seller, through the medium of the Company, it follows that the intervention of the middleman and speculator will be unnecessary, and the profits heretofore intercepted by them will revert to the producer.

Third—Reduced commissions. The privilege of the exclusive handling of Nova Scotia apples in the several markets will enable a substantial saving to be made in commission and brokerage charges.

Fourth—Uniform and systematic management. Not the least of the advantages that will accrue will be the regular, orderly, business like methods that will supersede the present slipshod and wasteful manner in which the great bulk of our apples are handled and marketed.

I am satisfied that this is a complete, practical and workable scheme, and that if carried on efficiently on the lines indicated, it will solve the difficulties connected with the transportation and marketing of our apples, and be of untold advantage to ourselves. It has successfully stood the test of criticism ; it was exhaustively discussed at the recent annual meeting of the Fruit Growers' Association, and was unanimously endorsed by the association ; and

I would like that it would receive a similar expression of approval from this meeting.

I will now bring these observations to a close, not that the subject is exhausted by any means, but because I fear I am trespassing upon your time and patience. The subject is a somewhat unusual one for our meetings, but it is one worthy of our most serious consideration, and my object will have been gained if anything I have said will help to a general and more intelligent interest in this important question. In our days of strenuous competition all the resources of combination, experience, capital, art and science are being vigorously applied to lessening the cost of production and improving the means of transit. This is true of every industry, and we farmers will inevitably go to the wall unless we co-operate heartily for our mutual benefit and protection and avail ourselves to the utmost of our natural advantages, and adopt approved and systematic methods for lessening the cost of production, transportation and marketing. We must wake up from our lethargy and abandon our antiquated easy-going mode of working; we must perfect our "social efficiency" and learn to co-operate loyally for our mutual benefit. We must show ourselves worthy of our unique natural and geographical advantages and turn them to profitable account. I cannot do better than conclude these observations by quoting some remarks of ex-governor Hoard of Wisconsin at the recent Dairymen's Convention of Eastern Ontario. Mr. Hoard is one of the most intelligent, successful and practical farmers on the continent, and his remarks, while having reference more particularly to the dairying interest, are none the less of general application. He said:

"While a great reduction has been made in the cost of production in other channels, the farmers were still producing as expensively as they ever did. The majority of the farmers are just where they were 25 years ago. So far as the actual cost in labor and capital is concerned, it is just as great with 90 farmers out of every hundred to-day as it was 25 years ago. Unless they

"wake up they will be crowded out of the business. The merciless
"march of competition must apply to them as it does to every other
"man. They will be ground to powder between two millstones—
"one the progress and improvement in the cost of production in
"other countries; * * * and the other a steady and unyielding
"refusal to study how to reduce the cost of production, how to ac-
"commodate himself to the overmastering demand for cheaper
"food, and how to put more and more intelligent thought and cal-
"culation into the farmers' end of the business. A large percent-
"age of the distress and complaint among farmers is attributable
"not alone to hard times but to the fact that they have not learned
"the lesson of cheaper production." I commend these remarks
to your consideration. I think it is decidedly advantageous that
we should hear the truth about ourselves occasionally; there is
just the chance that some of us may take it to heart, that a bow
drawn at a venture may sometimes hit the mark and lead to good
results.

This paper was followed by one on

HOW CAN OUR APPLE SHIPPING BE IMPROVED?

By JOHN DONALDSON, PORT WILLIAMS.

The past season has brought us face to face with the ques-
tion, "Will apple growing continue to pay us?"

When we consider our natural advantages, not only as regards
climate, in producing superior flavored apples, unexcelled perhaps
by any other country, but also our geographical position in regard
to the great markets of the world, we should not hesitate in
answering in the affirmative. Yet with such abundant crops as we
have had this year, and with an increasing production in the near
future, it is evident that we must improve in our present methods
both in growing and in marketing. We have learned that grow-
ing apples is one thing, but marketing them is another, and there
is urgent need that we improve in both of them. We must not

only grow finer apples, but we must market them at less expense. Thus our apple shipping can be improved in two ways :

- (1) By individual effort in shipping finer stock.
- (2) By co-operation in marketing them at less expense.

By (1) is meant the individual effort in the growing of better fruit, caused by better cultivation, more spraying and judicious fertilizing. The discarding or grafting out the poorer varieties of apples, or the growing for export of only those kinds in which we excel other countries. Then there is the better packing of fruit, by which I mean not only more honesty, but also exhibiting more skill or knowledge, so as to have the apples open to the best advantage before the consumer.

(2) By co-operation, *e. g.*, the Shipping Company now being formed should help us to market our fruit at less expense. It is self-evident that we can obtain by co-operation what we could never get as individuals. Union is strength, and in all business arrangements the larger the business the more favorable the terms. Now, while everyone will admit the advantages of co-operation by the Shipping Company as explained by Mr. Innes, in regard to securing better freight rates and a superior class of boats, I distinctly affirm that he is very unpractical in his views about the abolition of all middlemen now in the business, and in his views of the great saving that would thereby be effected. Now the abolition of all middlemen, from the producer to the consumer, while it is very desirable, is yet, under the existing state of business, really impossible. From the existing state of things we apple producers cannot reach the English consumers directly, therefore we must employ an agent or commission merchant to work for us. Now where is the advantage of having this man an accredited agent of the company? But you say we have now no check on those English firms; how do we know that they send us true accounts of sales? *They* are not true business men who have raised this cry of dishonest practices on the part of English

commission men, and I would not notice it at all were it not that it seems a rather taking cry among some of our farmers and fruit growers. Without referring to the pride Englishmen take in the scrupulous honesty of their merchants as contrasted with those on this side of the water, I would say that now we are much better off than we would be had one man, even a Nova Scotian, the exclusive sale of our apples. Now we have healthy competition, is it not the firm sending us the best returns that get the most business? Here is our safeguard, the competing of one firm against the other for business.

Now what about the saving of expense that Mr. Innes tells us would be the result of the abolition of all these middlemen who are getting so wealthy out of us fruit growers, and what about the reducing of the selling percentage? What is our situation to-day? All we growers have to do is to haul our apples to the cars—no bother about loading cars or keeping them warm this cold weather, no bother seeing whether they get in the steamer or making out bills of lading; all this is done for us and our apples are sold in London, and all we pay is 5% commission. . . . Again, can one firm or one agent on the other side handle our whole fruit shipments cheaper and more advantageously than several? I say that actual experience has shown no. Even the quantity of fruit that our present largest exporter ships, he finds it pays him best not to ship all to one firm. Here is another case where actual experience is better than mere theory. We have had a case this present season of an English firm handling apples for less than 5%, but with what result? I think I am safe in saying, not a satisfactory one by any means. It is not the cheapest commission men that we wish to employ, but those who will send us the largest returns.

The erection of warehouses in many places are wholly unnecessary. Take Port Williams station for example. The apples are all within a radius of three miles, and can be drawn at any reasonable time throughout the winter without danger. The

small space that each would have for repacking—for all would be working about the same time—would be totally insufficient, *e. g.*, the Grant warehouse at Annapolis, while the time lost in travelling back and forth for repacking would prove beyond a doubt the advisability of having the fruit on your own premises. Of course some stations may be differently situated, but I think where warehouses are needed they should be built by capital supplied in those districts, and not by the Shipping Association.

LINES ON WHICH SHIPPING COMPANY SHOULD WORK.

1. By guaranteeing the shipment of large quantities to secure the very lowest rates of freight.
2. To encourage better fruit boats ; to require government supervision over our subsidized line, so as to secure as low rates as are given from other ports ; to encourage another line running from an American port to call at Halifax, so as to have two regular lines of superior boats, thus giving rather smaller but more frequent regular shipments.
3. To seek new markets, not only in Great Britain and Ireland, but also on the Continent, and to charter boats for such ports as may be deemed advisable.
4. To introduce a better barrel, so that our fruit should not be placed at a disadvantage in any of our foreign markets. No matter how large the Canadian or American barrel may be, ours should be fully as large.
5. To secure a better system for obtaining reliable market reports.
6. If practicable and advisable, to secure cold storage accommodation for our more perishable fruits and other products.

Before discussing these two papers, W. A. Ferguson, Guysboro', moved, and Hugh Fraser, Elmsdale, seconded the following :

"Resolved,—That we, the members of the Nova Scotia Farm-

ers' Association assembled at Middleton, express our deep sympathy with our esteemed President, John B. McKay, at his sudden illness, by which he is left unable to preside at this meeting, and forced to return home at once."

Carried unanimously.

MR. SHIPTON, Bridgetown, and COL. S. SPURR, Melvern Square, both spoke in favor of Mr. Innes' scheme.

JOHN DONALDSON said the scheme wasn't regarded as practical in many details.

J. RUFUS STARR advocated the scheme. We should sink all trifling personal prejudices and work for the general good. We must co-operate.

MR. VROOM, Middleton, said we have reached a stage when we must work in unison.

P. INNES moved the following resolution regarding this scheme and M. G. DeWolfe seconded it. Carried.

"Resolved,—That the Nova Scotia Farmers' Association in session, after discussion and consideration, do endorse and approve the project of the "Nova Scotia Apple and Produce Shipping Company, Limited," as a practical, business-like scheme, that will solve the main difficulties connected with the transportation and marketing of the apple crop; and do heartily commend it to the favorable consideration and active support of the fruit growers and farmers as an enterprise of incalculable importance to the future of our great industry."

MR. INNES read a second resolution, which was seconded by G. C. Laurence and carried.

"Resolved,—That, in view of the co-operative character of the undertaking, of the general public importance of its objects, and of the profitable development that its operations will give to one of our great provincial industries, this Association respectfully requests the Legislature to pass the Act to incorporate the N. S. Apple and Produce Shipping Company, Limited, without exacting the customary fee for a private Act; and further solicits members of the Legislature, especially those for Hants, Kings and Annapo-

lis Counties, to urge the acquiescence of the Government and Legislature in this request."

HUGH MUNRO moved that the election of officers be proceeded with at once. Seconded.

The President thought it would be better to defer it until to-morrow morning.

Moved and seconded that the election of officers take place to-morrow morning.

Moved in amendment that the officers be elected after hearing the report of the Finance Committee. Carried.

E. B. ELDERKIN moved and Hugh Fraser seconded the following resolution :—

"*Resolved*,—That, in the judgment of the N. S. Farmers' Association, it is desirable that a lecture or lectures, capable of giving practical information on farm practice from a scientific standpoint, be employed to deliver addresses throughout our rural districts ;

"*And further resolved*,—That we ask the Local Government to furnish such lecturers to carry on this work."

J. H. CAVANAGH moved in amendment that this matter be submitted to the new officers.

M. G. DEWOLFE supported the motion.

P. INNES said the Act already covered the ground.

HUGH FRASER endorsed the idea of educating the "back-woods" farmer.

WM. YOUNG said the scheme wasn't practical, unless the man secured to lecture was a successful, practical farmer. A college graduate wouldn't fill the bill.

PETER INNES again objected to the passing of the resolution.

W. O. CREIGHTON said that people who cannot afford to attend these meetings must be reached. If this Association is prepared to put money to a practical use, they will have no trouble in getting money from the Government.

MR. CURRY also endorsed the spirit of the resolution.

MR. INNES withdrew his opposition on being assured by Mr. Elderkin that it was not intended to make the appointment permanent.

The motion was passed.

M. G. DEWOLFE—If a man has a farm that cuts from forty to fifty tons of hay, will it pay to sell \$100 worth and buy that amount of bone meal?

B. W. CHIPMAN, Secretary of Agriculture, said yes. Bone was very profitable, in his own experience, when applied to poor pasture land.

W. O. CREIGHTON—This should be determined by experiment on the part of the farmers themselves.

C. H. CHURCHILL, Yarmouth, then read a paper on

THE NATURAL STATE OF SOILS AND THEIR IMPROVEMENT.

By C. H. CHURCHILL, YARMOUTH.

To fully understand a soil we must first know its origin. We should also know what kind of plants grew upon it in its wild state, and should study its chemical properties. Some soils have originated from the decomposition of rocks; in some cases the bed rock upon which they rest. Rocks are broken up by acids, by the roots of plants, and by the expansion of freezing water. Other soils have originated by the carrying power of water. The washing of heavy rains on the highlands collects particles of broken rock, little pieces of wood and leaves, and carry them down to the lowlands and deposit them, and gradually, year after year, the work goes on until the lowlands are coated with a soil rich in plant food, such as our intervalles. Again, water, in freezing in winter, freezes around rocks, and when the freshets come in the spring the ice lifts the rocks and carries them along, sometimes great distances, and, breaking up, drops them on some formation which is entirely dif-

ferent from the one on which they rested before being disturbed, and these rocks, grinding up, are broken first into pebbles, then sand, and, finally, mud. Here we have a soil rich in inorganic matter, but lacking in organic matter or humus. Every soil that has been transported in this way lacks decayed vegetable matter.

Soil is a porous substance and has the power of condensing air. These pores, or capillary tubes, have the power of lifting the water and holding rainfalls above the water level or the bottom water of the soil. About two-thirds of the soil has capillary spaces and one-third is non-capillary. Gravel has too many non-capillary spaces. Clay has too many capillary spaces. The bottom water of the soil is the water which we see when wells are dug. It is better to have soils in which the bottom water never rises above eight feet nor sinks below twenty. When it gets below thirty feet the soil becomes more or less barren. The number of capillary spaces in a soil is the measuring of its capacity to hold water. The capillary spaces of the soil can hold water from a rainfall a great deal better than they can lift it. The water rises in the capillary tubes during the day and collects in the upper layer of soil in the form of vapor, and some is given off, and at night, when this upper layer becomes cold, it will give off its vapor into the soil. If we cultivate the soil during the day we break off these capillary tubes and rob them of their power to give off their vapor into the air. Thus cultivation is a great benefit in a drouth.

SOIL AND HEAT.

The great source of heat in the soil is from the sun. The sun warms the soil and the soil warms the air. The next source of heat is from the decomposing of vegetable matter in the soil. The color of the soil affects the heat, providing the composition is the same. The blacker the soil the easier it warms. But sandy soil warms fastest. Soil warms better in a rough state. If smooth, it refracts the rays instead of absorbing them. Thus cultivating warms the soil.

The necessary properties of a soil are, first, easy penetrability to roots, to moisture, to air and to fertilizers. Compactness enough to retain moisture and fertilizers. Readiness to absorb the heat of the sun and to make use of the heat. These properties depend mostly on three substances, *sand, clay and vegetable matter*. A great proportion of sand gives rise to a light soil, easy to cultivate, readily dried and warmed, but tending to sterility because it permits substances to be leached out by rains. An excess of clay, which forms a heavy soil, retaining moisture and fertilizers, but cold and hard to till. Where humus is in excess we have a peaty soil, which, when properly drained, is easily warmed and dried, but gives little support to plants, becoming sour from acids, and it lacks the mineral elements of plant food.

A good soil would contain from 60 to 85 % of sand, from 17 to 30 % of clay and iron oxide, and from 5 to 10 % of humus.

Sandy soils should be mixed with clay, quicklime or clayey marls.

The tillage of sandy soils should be shallow, about three or four inches being deep enough, so as not to allow the moisture to run off.

Mucky soils need careful drainage treatment with gravelly sand and manure.

Heavy clay soils need deep draining and mixture with coal ashes and quicklime.

Every fertile soil must possess a certain amount of inorganic substances which go to make up the tissue of plants. Different plants take different substances in different proportions from the soil. Soil has the power of fixing and retaining bases as K_2O , Ca , Mg , and, in place of these, it will give up other bases. This power of the soil to retain bases is increased by treatment with salts. That is, if the soil has been treated with lime it will retain more K_2O . This power is diminished by treating with acids.

Humus is a direct source of carbon. The soil decomposes

and the CO_2 goes into the plant. Again the humus concentrates plant food and holds it near the surface.

Water tends to dissolve a considerable amount of food from the soil anywhere from $\frac{1}{2}$ lb. to 10 or 12 lbs. in 100. The extract made by water in the soil contains all that is necessary for plant food excepting H_3PO_4 and H_2SO_4 .

There is more danger of exhausting the soil by the using up of H_3PO_4 than anything else. Different crops take different amounts, and by following a good rotation these constituents are at a fairly good average.

Another constituent of the soil is air. The soil, being porous, condenses air in the proportion of 65 of Oxygen to 75 of Nitrogen.

Plants will not grow without free Oxygen, which, being condensed in the soil, is always decomposing vegetable matter. Humus contains different kinds of acids. When the soil is ploughed the Oxygen attacks these acids and breaks them up into organic acids as carbonic acid. These acids again attack the minerals of the soil and helps to dissolve them. Thus cultivation sets free plant food.

This was followed by L. J. Sims, of Yarmouth, with a paper on "The Silo."

THE SILO.

BY BYRON C. SIMS, YARMOUTH.

Mr. President and Gentlemen of the N. S. Farmers' Association:

The fact that I have been requested to give my experience in regard to Silos and Silage, together with some practical hints in connection with the same, to be read before a meeting of the above-named Association, is the only apology I have to make for this article, and if any suggestion that I may give, or any experience of mine, shall induce any brother farmer to take a step that will enable him to feed his stock at one-third of the present cost,

at the same time getting larger returns, and, consequently, greater profits, I shall feel amply repaid. I believe that in this connection farmers need exhorting rather than teaching, for it seems impossible that they can remain ignorant of the principles and methods of the silage system, when so much has been said and written upon this subject. My observation has led me to believe that farmers are more conservative in their methods than are men of any other line of business, and the idea that "what was good enough for my grandfather is good enough for me" seems to prevail too largely among us, and we seem to forget that, with the keen competition which we meet at every turn, with the consequent falling off in prices, the cost of production must be lessened, in order to give us the same margin of profits that our forefathers had with their system of management.

Now, every intelligent farmer who reads (and the man who does not read and study the science of agriculture cannot farm intelligently) knows that the matter of Silos is not a fanciful theory, liable to explosion at the first practical test, but we have the testimony of thousands of farmers who have thoroughly tested it in all its bearings, and who agree in pronouncing it a success. It is generally conceded by stock-raisers that June is the best month for stock. Young cattle grow faster and thrive better, bees lay on flesh more readily, cows give more milk, make more and better butter than in any other month, which fact is due to the freshness and richness of the June grasses.

Granting this fact, does it not seem economical on our part to endeavor to raise the standard of the other months up to that of June, and I believe the time has come when, in these respects at least, we may have June all the year round. That three cows can be fed with less expense by this method than one can be by the old may seem to be a broad statement, and yet my experience has satisfied me that the claim is not an extravagant one, and many have placed the ratio much higher. Considering this fact,

and also the fact that the Silo is not of recent invention, but dates as far back as 1842, it is certainly 'marvellous that so few, comparatively, have availed themselves of the advantages of this method. One advantage, apart from the feeding, is this: We are not likely to lose a good part of our forage crop on account of the weather. We can cut our green crops of corn, rye, clover, sunflowers, horsebeans, or whatever crop we may choose for ensilage, and immediately, while filled with the rich juices, place it in the Silo, where, by the slight chemical change which takes place during the process of fermentation, the feeding value is enhanced, so that it is not simply as good as, but really better than the natural production. It is also well understood that dry hay and grain is hard to digest, and, to remedy this, many have resorted to steaming their hay, grain and meal; but this is attended with considerable inconvenience, and unless one has a large stock and is well equipped, the benefits arising therefrom hardly pay for the trouble and cost. Now, this is all remedied by the silage system. Having been heated to 125°, the silage comes from the Silo in a semi-cooked state, easily digested, and its moist condition makes it an excellent fodder with which to feed short feed.

Prof. E. W. Stewart, in his work on "Feeding Animals," written some years ago, in urging the importance of steaming food for animals, says:—"The ensilage system, lately introduced, will, when put in practice, quite supersede the necessity of steaming, and give cows all the advantages of pasture. It will also fully take the place of roots in the English system."

(Stewart on Feeding Animals, page 343.) "It is the verdict of all who have adopted the silage system that this prediction was correct. Certainly this is an advantage that will be recognized by all economical feeders."

Another advantage of no less importance is that of the manure. If we get three times the amount of feed from an acre of land, it is certain that we get three times the amount of manure,

and if the food is richer, the manure is correspondingly so ; and, in applying the manure to the soil, the gain is no less marked, for this reason, that for the silage crop we plow the manure under, so that the soil and crop get the full benefit of it, while for grass we spread it on top, one-half to be washed away, and the greater part of the other half to be lost by evaporation. The cultivation of the soil is another benefit not to be lost sight of, as by the thorough cultivation necessary to the silage system, the soil is continually increasing in fertility, while, by the old method, the grass land will run down in a few years, and have to be plowed up. It is true, objections have been, and are being, made to Silos and ensilage, and it is also true that many have no argument in them ; for instance, some object to silage because occasionally an animal does not eat it readily at first. The same is true of corn meal, or cotton seed meal, yet no sane man would offer that as an argument that either of those was not good feed for stock. Others say they have known cows to be permanently injured by eating it. This may be true, but are not many cows ruined by the injudicious feeding of grain. Still others say that they have known some to abandon the Silo and call it a failure. This is not to be wondered at, as many men make a failure of everything they undertake.

The necessary expense involved in the ensilage of fodder corn has been very much overrated by those who have not made a trial of it. The cost of Silos has been reduced to a minimum, they not costing more than one dollar per ton of holding capacity, while some claim that they can be built for fifty cents per ton. In the case of mine the cost was about seventy-five cents, and it serves the purpose admirably. It is built square, double-boarded perpendicularly, with tarred paper between, and girders around it three feet apart, dovetailed at the corners, and the sills strapped at the corners with iron straps, and the bottom is cemented. Any man who is mechanic enough to build a hen-coop can build a Silo. The cost of filling is also much less than formerly, when it was thought that it must all be done in a day or two, the cost for extra

help being large ; but, coming in, as it does, as part of the regular routine of farm work, no help is needed outside the usual working force of the farm, and from two to four weeks may be taken for filling, working about two days each week.

Notwithstanding all that may justly be claimed for this system, it must be remembered that the Silo cannot be looked upon as the only essential element of success in farm practice, and the farmer who tries to put his stock through with nothing but silage, will find that he has made a serious mistake. A certain amount of hay is necessary for the proper feeding of stock, but I have found that my cows do not eat more than one-fourth the amount of hay now that they did formerly, when I also fed heavily with roots. It is generally admitted that succulent food in some form is necessary for the most economical feeding of stock, and I am convinced that the silage system is destined to supersede the feeding of roots to a very great extent, to milch cows at least. As to the best crop to grow for ensilage, I think Southern corn, with sunflowers and horsebeans, is the most desirable, and gives the most satisfactory results.

In conclusion, let me urge upon all farmers, and more especially those who are building new barns or remodelling old ones, to consider well the advantages of the silage system and plan for a Silo.

WM. CORNING, Yarmouth, was greatly pleased to have heard these excellent papers read by young men coming from his own county. These were the stamp of young men now wanted in this Province.

F. R. TROTTER moved, and G. C. LAURENCE seconded, a vote of thanks to Messrs. Churchill & Sons for their practical papers.

A discussion on the silo ensued.

HECTOR McLEAN, Bridgetown, stated that he had not had

satisfaction with a cheap silo. He advocated stone or concrete walls.

The Secretary, PAUL C. BLACK, said he had nine years' experience in making ensilage, and that he had done it all in cheap wooden silos. He thought if the construction was right a wooden silo was best, taking cost into account.

F. L. FULLER described the silo at the Truro Farm, built of only one thickness of grooved and tongued boards. This keeps the ensilage perfectly.

F. M. CHIPMAN, Nictaux West, spoke of his experience with silos, and said if he were going to build another silo it would be a round or stave silo. He found a wooden silo would soon rot out, though he thought cold tar would keep out the wet and preserve the silo.

H. MCLEAN said he was sorry he could not honestly advocate the cheap silo. He thought a good silo could not be built for less than \$100.00.

P. C. BLACK gave his experience at the Guelph Experimental Farm in examining the silos there a few weeks ago. They had been trying the experiment of covering the silage with five cent cotton painted with crude petroleum, and there was scarcely any waste beneath it.

A MEMBER.—Prof. Smith, of Truro, says that Nova Scotia cannot grow corn successfully.

A VOICE.—That is a matter of opinion. Some of us are quite successful.

LEANDER RAND, Canning, said he had had good luck with his silo. He believed in growing the varieties of corn which would mature pretty good ears.

Meeting adjourned till this evening.

SECOND DAY, EVENING SESSION,
JAN. 27TH, 1897.

Meeting opened at 7.30 o'clock, acting President Parker in the chair.

PROF. E. E. FAVILLE, Director School of Horticulture, Wolfville, addressed the meeting on "Some Salient Points in Present Fruit Culture." Prof. Faville spoke upon the advisability of extending horticultural education to various sections of the Province. There are some very favorable fruit-producing localities in Nova Scotia outside of the Annapolis Valley. In some of these sections a rapid advance was being made, and as much care taken of the orchard as in the Annapolis Valley. He would mention a few of them. The Jordan River Valley in Shelburne was a favored fruit section, and to-day was producing some most excellent fruit. Caledonia Corner, in Queens County, was as well adapted for apple culture as most parts of the Annapolis Valley. The neighborhood of Bridgewater, in the LaHave Valley, had also good fruit-producing capabilities.

A crying evil which is being practiced in these out of the way places was the planting of miserable, worthless varieties of poor trees. He would encourage the formation of a Provincial Nursery under Government management, where reliable trees could be got at reasonable prices. In the eastern part of the Province, Pugwash and vicinity in Cumberland, and River John in Pictou, had natural adaptability for fruit-growing. You should make it a rule, in buying your fruit trees, to purchase only standard varieties. Don't deal in novelties; you can't afford to do it.

It was wise that all localities should grow fruit and vegetables for home consumption. They should go into the business intelligently. To do this they needed special instruction.

He was sorry to say that a large number of the Agricultural Societies that he and the Secretary of Agriculture had visited were

not doing good work ; their members were not taking an interest in their work.

Cape Breton was quite a good fruit-growing section, but the growers lacked knowledge. The apples grown in Cape Breton had very much better keeping qualities than those in the western part of the Province. Plum growing could be stimulated with profit in Cape Breton, as in the mining section there was a large consuming market. The bark louse was a very prevalent pest on the island. For these they should use an alkaline wash.

The Margaree Valley had good conditions for plums and hardy apples. The people there needed more knowledge how to grow these fruits, however. Coming back to Cumberland, Colchester and Pictou Counties, we find nearly all the varieties of apples grown in the Annapolis Valley.

The overproduction this year would, he believed, be of ultimate benefit to the Province, as it would stimulate the manufacture of the inferior fruit into evaporated fruit, jams, jellies, cider, etc.

He believed there was quite an opportunity for the growing of pears in the Annapolis Valley. He had seen quantities of pears marketed in the English market, and they were not equal to those we can grow here.

In regard to new varieties, he thought we now had plenty of good standard varieties. The Rome Beauty last year brought the highest price in the London market. It was a large, red, hard winter apple. Its season was in March and April.

There were places in this valley where peaches would thrive well. A sandy soil is best for peaches. You can top graft plums on peaches in sandy soil, and *vice versa* in clay. Elberta and Louise were the best varieties of peaches grown in Michigan.

The proper sorting and packing of fruit was most important. It was not advisable to market number twos under your own name. The shrewd Belgians never put their own names on a barrel of number two apples. You must pack properly. There

are but few who know how to pack well. The making of a good head was an art—there was no deception in having the barrel well faced. After the first layer was placed nicely, stem down, the second layer should show the blush of every apple in the interstice of the top layer.

The matter of pruning was a most important point. It was necessary to keep down the suckers. Then avoid bad crotches, and thus save your trees from splitting. Watch your young trees and have them properly trained. Stake the trees, and tie with leather or cloth strings. We should endeavor to have the tops and roots balance when setting out trees. It was a good plan to heel in trees for a few days previous to setting them out.

In pruning old trees, you will get the best results by doing this work in the winter. Good rules for pruning were:—(1) Prune out cross limbs. (2) Let in the sunlight to color the fruit. (3) Cut close to the trunk; don't leave any shoulders. Paint all large wounds with grafting wax; shellac and alcohol or white paint will do very well.

WM. YOUNG wanted to know if it was most desirable to prune to a leading shoot or to a bowl.

PROF. FAVILLE thought the bowl shape was most natural to the tree.

GEO. B. MCGILL said that a few of the branch suckers if left on the Nonpareil apple tree, produce the best fruit, and help to renew the head of the tree.

J. R. STARR wished to know, in regard to the treatment of wounds on old trees, if scarifying the edges of the bark would help to heal the wound.

PROF. FLETCHER thought it would.

W. O. CREIGHTON, West River, Pictou, wished to thank Prof. Faville, for the good work he had done for horticulture in his county. The fruit-growers of the Annapolis Valley were hurting

the markets there, as well as injuring themselves by sending so much refuse fruit. Better to keep it at home and feed to the stock. He disapproved of making apples into cider.

COL. W. M. BLAIR, Nappan, was next called on. He said he simply wished to say a few words of counsel from his own private standpoint, as to some of the work which was expected of this Farmers' Association. Knowledge was power, and science was knowledge, and the farmers of this county wanted all the science they could get, but they wanted it practically exemplified. From his experience, both official and unofficial, he was enabled to say that he believed that farming was to-day one of the best occupations in Canada.

Thirteen years ago the Rev. A. C. Macdonald, of Antigonish, was the man who started the first Dairymen's Association in Nova Scotia. It was a hard, uphill undertaking to start this work. Men would come in, but they would not pay their share of the costs. Finally, he said, we got some help from the Nova Scotia Government in the shape of a small annual grant. For eleven years the present Secretary had worked hard and faithfully, to his certain knowledge, to carry on the work of this parent Association.

Now that we had an Association properly established, he would say, let us encourage it, and continue its usefulness. We want co-operation. Don't crush out this Association; you need it. If there have been mistakes made, rectify them. Don't be discouraged. We must learn to keep up with the times, and this Association will be one of our best aids.

What has science not done? It has in many lines of industry accomplished things almost incredible. By it the lightning has come down from the heavens and carries our messages of joy or sorrow the world around; heats and lights our houses, and hauls our loads. This is science developed in one direction, and while this has been going on, science has not been applied in anything like equal degree to agriculture.

There are many things we should know. Geometry, botany and chemistry throw much light on our work.

It had been said that the Maritime Experimental Farm, the School of Agriculture and the School of Horticulture were all failures. If so, you were the parties responsible for it; you were the people to point out the defects of these institutions; it was your place to rally round them, to correct and support them.

Two thousand five hundred years ago Rome had better agricultural literature than we had to-day. Africa produced at that time 340 stalks of wheat from one seed. Is there no room for agricultural research to-day? Cannot our experimental farm still do some useful work? How about the application of fertilizers; do we know all about it? How about the feeding of stock; do we get the very best results possible? To-day it was the farmers only who were complaining about the cost of these institutions. No other class was grumbling about them. Prof. Smith, at the School of Agriculture, should not be condemned for not doing his duty, when he was already trying to do three men's work. The Fielding Government's record in regard to agriculture was a creditable one, but the farmers had not taken advantage of it. In Germany to-day, in an area the size of Nova Scotia, there were seventy-five agricultural schools.

Before closing, he would make some remarks upon experiments that had given results in the Experimental Farm at Nappan. The question had arisen as to how much manure it was necessary to put on an acre of land to get a crop. They took three half-acre plots, and ten, twenty and thirty cartloads of manure to the acre were applied. The land was well drained. The question here arose, what is well drained land? It depends on the soil. Some land is too well drained, and all the fertility will leach out. On heavy land, underdraining must be done to afford the clover and the deep feeding plants a chance to run down and subsoil your land. More humus can be got from the clover crop than

from any other. For this the natural water level must be lowered, and a large amount of additional plant food will then be made available. A soil might be soluble for plant food, and it might be insoluble. This will affect the quantity of manure to be applied. Cultivation will also affect the quantity. Sixty loads of manure may be applied to an acre, but it can't be utilized by the crop. He had found that twenty loads to an acre on well drained land well cultivated, was as good as forty loads on wet and badly prepared land. We were to-day just on the brink of agricultural knowledge. The worst enemies to improvement in agriculture were the men who knew everything.

The Colonel closed his powerful and eloquent address with an appeal to the farmers to stand by their Association, to assist in the carrying on of the Experimental Farm and agricultural schools, and to strive by every means in their power to advance the agricultural interests of the Province.

DR. JAMES FLETCHER was next called on for a brief address. He said it didn't matter very much who he was or what his name was, but his work at Ottawa was to study up the lives of all the insects injurious to plants and animals, and of the lives and conditions of crops and weeds grown in Canada. He also studied up fungus diseases. All these matters were important, and he was now glad to say that information could be had on most of these things for the asking. Experiments were being tried with new classes of all crops, all horticultural crops, and all kinds of grasses, by hybridizing and acclimatizing. Chemistry was doing a great work for the farmer, and Prof. Shutt, of Ottawa, was always ready to help everyone he could. He was examining soils, giving evidence of their quality to those who submitted samples, and also testing well-waters. In this branch of work he was doing most useful service. Then he was studying and giving information on plant and animal foods, etc., and all the other departments of the

Farm were carried on with the best available skill, solely and exclusively for the benefit of the farmers of Canada.

GEO. W. FORREST, Supt. Experimental Farm at Nappan, on being called on, said he could hardly be expected to say anything in regard to experimental work in the short time at his disposal. He would invite all farmers to visit the Farm at Nappan and see and learn for themselves, to apply to him for seed grain, and for any information he might be able to give.

B. W. CHIPMAN, Secretary of Agriculture, gave a very witty address for five minutes, which kept the audience in roars of laughter, but which contained at the same time a fund of useful information.

The Finance Committee now reported. Moved and seconded that this report be considered clause by clause. Passed.

Moved and seconded that clause one be adopted.

Moved and seconded in amendment that this clause be not adopted. After considerable discussion this amendment was carried.

HECTOR McLEAN moved that the Treasurer's Statement be adopted. Seconded by Wm. Young. Carried.

Meeting adjourned.

THIRD DAY, MORNING SESSION,

JAN. 28TH, 1897.

Association convened at 10 o'clock, acting President Parker in the chair.

The session was pretty well taken up with the election of officers. The report of the representatives on the Exhibition Commission was called for, and E. B. Elderkin gave a verbal report, which was adopted.

P. Innes, Coldbrook, and E. B. Elderkin, Amherst, were appointed on the Exhibition Commission.

Meeting adjourned for dinner.

AFTERNOON SESSION.

Meeting called to order at 2 o'clock, President Parker in the chair.

A. G. Goodacre, Grand Pré, read a paper on

POULTRY KEEPING.

By A. G. GOODACRE, GRAND PRÉ, N. S.

This is the first time to my knowledge, at all events, that this subject of poultry has been presented at any of our several Association meetings.

I personally regret that Mr. A. G. Gilbert, Poultry Manager at the Central Farm, is not with us to-day, to give us one of his popular talks on "Poultry for Profit." However, I will in some measure, try and compensate the matter, and must in this be very brief, and I trust to the point.

We will first look at the advantages to be secured in keeping poultry.

First—the small outlay in stock and buildings.

Secondly—the small amount of land required; the proportion being 100 matured fowls an acre. Geese and turkeys need more range, and where a suitable situation is secured, can be made most profitable, ducks also require very little land and are easily raised.

Thirdly—There is, when properly managed, a constant revenue derived; thus we get winter eggs, then broilers (chickens marketed under 4 lbs. per pair), then roasters and summer eggs, and lastly, where geese and turkeys are kept, the early and Christmas market. Where ducks are kept they are put off in April, May and June, at from 75c. to \$1 per pair and possibly more, and at from ten to twelve weeks old, dressing then all the way from 8 to 12 lbs. per pair. Chickens, and in fact all poultry and also eggs should be sold by the pound; early chickens should not be sold under 15c. per pound.

Fourthly—We might say that poultry and eggs furnish a wholesome and nutritious food for home consumption; thus we have a small capital required; only an acre or two of land, a constant revenue and a wholesome food.

How surely this adjunct will be a great help to the farmer, to the profession and to those who hold small lots in towns. We are here to-day to consider the interests of the farmer, and, if possible, to find for him a source of profit in keeping poultry in this instance; we must take him in his present position and not recommend him to incur expense when he has not the means by him to secure the best equipage.

THE BUILDINGS.

The buildings must be reasonably warm and dry. There should be provision made for the hens to have part of a building for a shed to scratch in; this when practicable should have from 6 to 12 inches of sand in bottom, and then at least 10 inches of straw or chaff on top, wherein to scatter grain, thereby keeping the hens not only busy and free from lice, but warm in this cold weather. The roosting room should have plenty of light in it, and the floor can be of boards or earth, taking care to keep it cleaned out at least once a week; the perches should be only two feet from the ground, and moveable; these are best made out of a piece of 2 x 4 studding neatly planed, and edges just smoothed down. Dry earth or ground plaster can be scattered every morning under roosts but not wood ashes or lime; hard coal ashes are also beneficial.

In a building 10 x 12, including scratching shed, you can keep from 20 to 25 head of hens according to the breed or age, but not more, and better less. Have a tight door to building.

FEED.

In morning give a warm mash consisting of any table scraps mixed up with two-thirds bran and the balance ground grain of some sort; but be careful in feeding cornmeal if you desire winter

eggs. Pullets will stand more than one year hens and the light breeds better than the heavy. On no account feed pure corn-meal scalded as a diet in itself; you will only "kill your hens with kindness." This soft feed must not be fed sloppy but crumbly, and only giving a half-feed, never enough to satisfy the hen; then throw a handful of grain into the litter and get them to work scratching. Keep drinking water, free from ice, by them at all times, also crushed oyster shells and good sharp grit; give a feed of green food at noon, such as potatoes, apples, mangolds, cabbage, or turnips quartered, and two hours before going to roost mix in the litter a liberal share of some hard grain. I use mostly a short plump white oat; ground bone should occasionally be supplied, but I much prefer the green cut bone and meat as cut by the hand power green bone cutters. As sure as you turn the crank of the green bone mill, when every other essential is seen to, you will be grinding the eggs out of your hens, and when you get slack at this somewhat hard work, the hen likewise will decrease with her offering. In all cases must a proper egg ration be fed.

VERMIN.

The birds must be kept free from parasites by the use of Dalmatian Insect Powder, and their quarters must be freed from the same by burning a pound of sulphur in it, after the birds have been driven out and every thing closed up tight; perches must be removed and saturated with coal-oil, also the nest boxes, which should be easily removed, and when placed back and filled with straw should receive a dusting of the powder. The building can be sprayed with kerosene emulsion with a little carbolic acid in it.

THE EGG YIELD.

A hen when she yields five eggs per week is at her best, though many will lay every day for two weeks at a time. To show you what I have accomplished in a very cold building with the thermometer three times down to zero, I will just state the egg yield

for last Jan. ('96) from five White Wyandotte pullets. They began laying on New Year's Day and laid altogether 75 eggs, an average of 15 eggs each in 30 days; these were sold for only 18c. per doz, which gave for the 6½ doz. \$1.17, and deducting 45c. for feed (9c. each) leaves a net profit per hen of 14c. for the month. This was under very trying conditions. Farmers should only select a few of their best hens to breed from, not mating more than 10 with a male, and for ordinary purposes they should be mated up by the middle of March, and the male bird separated from flock after the middle of May, and either killed or given an enclosure to himself; he can be kept two years without loss, but it is better for market poultry to avoid inbreeding.

INCUBATION.

Of course for very early chickens the incubator is the only resort, so I keep three on hand (one for duck eggs) and mate up flocks in middle of Feb. Last spring I managed to secure one hatch of 75% of fertile eggs, but it is generally below 60%; this was in a home-made hot water incubator. Perhaps by the novice, more loss is sustained in the rearing than in hatching. This machine was filled night and morning with a pail or more of boiling water, first of all drawing out nearly one pail to heat up again. The eggs are half turned twice a day with a rack, and the thermometer kept at 103°. I have also one imported machine and a brooder, also an excellent home-made brooder heated with lamp; this machine is to keep the chickens warm, and should be run up to 90° or 100° before placing chicks in it.

FEEDING CHICKS.

See that all chicks get fine sharp grit from the first, and don't feed till 24 hours from the shell, then giving bread soaked in milk and squeezed dry and oatmeal or rolled oats fed dry. It is best to bake a cake, composed of cornmeal and middlings with a little soda and a pinch of salt in it. Crumble this up and feed dry, not soaked. Green feed should be supplied in the shape of finely cut

clover, lettuce or cabbage and occasionally some meat. After two weeks, cracked grain can be fed and the feeding hours can be reduced from five to three times a day. You must keep them warm and give plenty of exercise, and free from any dampness, or else leg weakness will set in; this is also attributed to too much forcing. A Wyandotte is said to stand this forcing process better than the Plymouth Rock and to make a better broiler. They are finished off at from eight to twelve weeks by a week's feed of cracked corn and cornmeal. The roasters or large chickens as the Plymouth Rocks and Brahmas are grown to about 8 lbs. the pair. Mr. Gilbert has made quite a record for himself by making a Plymouth Rock cockerel at four months old weigh exactly 6 lbs.; you will here see the extraordinary gain on an average of $1\frac{1}{2}$ lbs. per month. At present I myself have not put on much more than 1 lb. per month. I got a Plymouth Rock cockerel to gain after being five months old 3 lbs. 10 oz. in $3\frac{1}{2}$ months, making the bird's total weight at nine months old about 9 lbs. The great aim in poultry raising must be greater and cheaper production. Cut clover hay is largely used now as a ration, it being prepared by cutting into $\frac{1}{2}$ inch lengths and either steamed or scalded; this can be mixed up in the morning mash. I consider whole corn almost essential in growing cockerels to heavy weights, but it should not be fed exclusively.

DUCKS.

Let us just look at what can be accomplished in duck raising; the Pekin is the favorite on this continent, though in England the duck-raisers stick to the Aylesbury. You know my brothers across the water are very conservative, but as far as I am concerned they are welcome to them. There is not a great deal of difference after all is said and done, but give me the Pekin; I want no other.

The first few eggs laid by ducks are invariably infertile; after that you will have very little trouble. Mine laid early in February last year.

The duck, unlike the chicken, takes very often 48 hours to get out of the shell when hatching; a chick at that time would not be worth raising. Feed, when 24 hours old, very similar to chicks. They should always have water before them so as to wet their whole bill. They can be weaned from the hen after a week, and should be kept in a small enclosure; should have grit, and be fed chiefly on middlings and cornmeal, scalded, and boiled potatoes or turnips, giving at least three feeds per day. The noon feed can consist largely of green stuff; some give only cut corn fodder when available, but green clover and lettuce are especially beneficial. It is a good plan to feed something in the way of meat, three times a week. I have used some of the prepared bone and meat meal.

GEESE.

Geese can be kept at a good profit where the surroundings are suitable; perhaps the cross-breds give the best gains. A breeder in the States who keeps several varieties finds the black African the most profitable, and gets them to lay forty eggs in the spring. This end is secured by careful weeding out of poor layers, and when a goose begins to down her nest, after laying the first litter, he shuts her up a few days, when she will go to work laying again. He uses incubators nearly altogether, especially for hatching out ducks. The Toulouse and Embdens are also fine breeds to keep, the latter being poor layers, but being pure white, are highly valued for their feathers.

TURKEYS.

The Bronze turkey still holds the fort against all comers. In selecting a turkey cock for breeding from, look well to size of bone in legs; a coarse bone is most desirable. This matter will also apply to the selection of cockerel in any breed; a fine bone denotes a poor constitution. In the laying breeds the hens are apt to break down when put to the egg test, and in the heavy breeds the chickens you are forcing will go off their legs.

GENERAL REMARKS.

Don't let your layers get their combs frosted, neither eat or walk on snow, nor be exposed to cold winds; these matters will at once arrest the egg yield. It must be the aim of those who keep poultry for profit to winter only selected birds. Thus with the hen you used a large proportion of early hatched pullets, and no hens in second moult. Ducks can be kept profitably to six and seven years of age, but it is better to change drakes every second year. I have made \$1 net per hen with a small flock and so can any farmer or his wife. The essentials to success are warm buildings, proper feeding and cleanliness; the matter of breed for egg production at all events is a second consideration, but it actually does not pay to keep mongrels. They owe their good qualities (if any) to the pure breed they originally sprung from, so why not draw straight from the fountain head, where they have been carefully bred for those qualities. We all need more light on this vast subject; we look for more recognition in poultry culture at our branch farm at Nappan where already they have made a start, and also at the government Farm, Truro. We have the Nova Scotia Poultry Association, but it is practically inactive. At all events as far as the farmer is concerned, we must look to the agricultural and poultry press for a helping hand, and I hope for more encouragement to the farmer in this class at our exhibitions.

GEO. B. MCGILL said he kept Plymouth Rocks for table fowls and Black Spanish for eggs.

The following resolution was adopted after some discussion:

Resolved,—That this Association request the Local Government to enquire into the affairs of the Nova Scotia Poultry Association, with the view to ascertain whether such affairs are carried on in compliance with the conditions of the annual grant of one hundred dollars, and also that the benefits accruing from that Association may be more fully participated in by the farmers of our Province."

L. C. ARCHIBALD, Antigonish, addressed the Association,

showing his loss by the recent system of granting \$400.00 bonus to new creameries. He had spent \$500.00 in visiting Ontario and Quebec, getting information which is now furnished by the Government. He spent \$15,000.00 in equipping eleven cheese factories. Through the increase of bonused factories he had lost in two years \$6000.00. He claimed for the old factories still running a bonus of at least \$200.00.

The following resolution was moved and seconded :—

"Resolved,—That this Association in session, after discussion and consideration, requests the Local Government to take into consideration the circumstances of the cheese factories which were in operation previous to the existence of the Act for the Encouragement of Agriculture passed in 1894, with the view of granting them a subsidy or assisting them in some other way, as has been done by the New Brunswick Government under similar circumstances."

Carried unanimously.

The following resolution was moved by J. R. Starr and seconded by John Donaldson :—

"Whereas,—In view of the extension of the work of the Nova Scotia Fruit Growers' Association requires additional funds for the diffusion of information throughout the Province, and

"Whereas,—At their annual meeting a resolution was introduced appointing a committee to wait on the Local Government, asking that an additional grant be made ;

"Resolved,—That we, the Nova Scotia Farmers' Association, endorse the measure, and recommend that additional aid be granted."

WM. YOUNG said before granting more money to schools (he understood this grant was for the School of Horticulture), we should first determine if these schools are doing just the work they ought. The schools at Wolfville and Truro seem to be repeating the work of each other to a certain extent.

F. L. FULLER said that at the Truro Farm they did not attempt to carry on experimental work. It was purely for practical farm instruction.

COL. BLAIR said Mr. Young had struck the right nail on the head. If our schools are not doing what they should do, thoroughly sift them to the bottom and find the cause, and set them right.

The motion on being put was carried.

WM. CORNING brought up for discussion the subject of the establishment of a Provincial Herd Book, with a standard similar to the Dominion and American Herd Books.

PETER INNES said that the Maritime Stock Breeders' Association lately formed at Moncton had taken up this matter, therefore it wasn't necessary for it to be discussed here.

C. R. B. BRYAN, representing the Pictou County Farmers' Association, said his Society was in favor of a Dominion Registry.

O. CHASE, Port Williams, was also in favor of doing away with our present Provincial Register.

WM. YOUNG said that with regard to Shorthorns especially, we should go slowly, as if the Provincial Register were abolished it would rule out many excellent animals.

Moved and seconded that this matter of Herd Books be referred to the Executive. Passed.

CHAS. R. B. BRYAN moved the following resolution, which was seconded and carried:—

"Resolved,—That the Local Government be requested to insert a clause in the Act entitled, 'An Act to provide for an Annual Provincial Exhibition' (Chap. 3, Acts of 1896), providing that in the event of a failure on the part of the Provincial Exhibition Commission to hold an Annual Provincial Exhibition in any one year in which there is no provision made for the holding of County Exhibitions, that the Governor-in-Council may authorize grants for the holding of County Exhibitions under the usual regulations."

WM. YOUNG moved that a committee consisting of the President, J. Rufus Starr and P. Innes be appointed to revise the pres

ent by-laws, and report at the next annual meeting. Seconded and passed.

The following resolution was adopted :—

"Resolved,—That the Nova Scotia Farmers' Association in session, and after discussion, decide to ask the Minister of Trade and Commerce to have the statute defining the size of apple and potato barrels revised, with the view of having a standard barrel of uniform size throughout the Dominion, and would recommend a barrel of the dimensions recommended by the N. S. Fruit Growers' Association."

A resolution referring to the compulsory adoption of wide tires on wagons was put before the meeting, but was not carried, as it was the opinion that this matter should be dealt with by the county councils.

WM. YOUNG moved, and A. B. Parker, South Farmington, seconded the following resolution :—

"Resolved,—That this Association put on record its objection to the high rates of freight charged by the subsidized steamship lines from Halifax to Great Britain, exceeding corresponding rates from New York and Boston, and ask the Dominion Government to grant a subsidy to no steamship company without making provision that the rates charged by them shall not exceed the rates on similar freights from United States ports to Great Britain. And this Association respectfully requests the M. P.'s for Hants, Kings and Annapolis to bring this matter to the attention of the Government." Resolution carried.

Moved and seconded that the following resolution be adopted:

Whereas,—The apple industry of the Annapolis and Cornwallis Valleys has grown from small beginnings to an estimated crop of 500,000 barrels in 1896, more than one-half of said quantity having to be transported by railway, and

"Whereas,—It is customary for railway companies to grant reduced rates of freight for the staple natural products of the districts through which they run, and

"Whereas,—The Dominion Atlantic Railway have always exacted the highest possible rates of freight on apples, averaging about three cents per ton per mile for hauling carloads, with no

expense for loading and unloading, and a much higher rate for smaller quantities, and have made but little reduction from their regular tariff rates, even for export, and

"*Whereas*,—The prices obtained for apples this season have scarcely more than paid expenses, and are likely to remain low in future,

"*Therefore resolved*,—That this Association memorialize the Dominion Atlantic Railway Company to take the altered circumstances of the apple industry into serious consideration, with the view of making a large reduction in their tariff rates, and of granting a still lower rate on apples for export." Carried.

The question of sheep-killing by dogs was, after discussion, referred to the Executive.

A vote of thanks was tendered to President Parker for his able tenure of the chair during this present Convention.

The meeting adjourned.

The following paper was to have been read at this meeting, but owing to lack of time it was omitted. This paper is so practical and instructive that it is given in full below:—

PORK RAISING.

H. B. HALL, GAGETOWN, N. B.

Mr. Chairman, and Gentlemen of the Nova Scotia Farmers' Association:—

I have been requested to contribute to the proceedings of this, your annual meeting, in the shape of a few notes on the Swine industry.

In accepting the honor I beg to remark that I do so with the idea of refreshing your memories rather than the suggestion of anything very new, and therefore trust you will have patience while listening to the old, old story. A good thing should be

repeated often, and until every farmer in the land becomes converted to the gospel of economic pork production.

In these days of close competition and unusually low prices of dressed *hog*, it will be well for us farmers to look into our practices and see if we cannot discover the "loose screw," and having found it, proceed at once to tighten it up and start afresh with the year 1897. Now, perhaps I can assist you in this work of discovery, and show you where the loose screw is. I found that screw long ago at Roseneath, and having found it I substituted the *pig* for the *hog*, and have since been reaping the benefit of the change.

The increase of dairying; and especially winter butter making, is fast putting many of the more advanced farmers in a good position to raise more pigs, and to raise them at any season.

And now we come to the *point*, the great governing point in the production of any commodity. I mean the *market*. Formerly, the market called for great, heavy hogs, weighing from three to six hundred lbs., and carrying a large proportion of fat, and for this class of pork the highest price was paid; and the fall and early winter was as good or better than any other time for carting the stuff to market. All that, however, is changed, and we must change also to conform with the times. If the market does not want big weights, it is quite useless our trying for the highest price when selling our six hundred weight of blubber. We must be governed by the demands of the times, and as now the people want "Baby Pork," by all means let us give it to them. To produce the same weight of Baby Pork we must keep a greater number of pigs, and as soon as they are ready for market—say 150 lbs. dressed—go and sell them, and then come home and kill and deliver in good shape on the very day you agree to do so. To do this to best advantage, it is very desirable to keep the sows breeding continuously; have them coming in with thin fresh litters as often as possible; and right here is where we make the con-

nection with winter dairying. Lots of skim-milk will at all seasons make it possible to raise fall and winter pigs. I have found the best time to sell pork is between 1st of February and the middle of August, but never in the fall and early winter when every Tom, Dick, and Harry is doing his level best to rush into the markets with his tons of fat.

A considerable proportion of Canadian Pig is finding its way to the great Eastern markets on the other side of the Atlantic, and is there selling in the shape of Hams and Bacon. You all know the reputation that Canadian "pea-fed pork" enjoys in England, as compared, for instance, with American "Corn-fed," always selling quicker and at a higher price. This is because corn makes *all fat* and the people don't want it. Peas, barley and oats on the other hand produce a much larger percentage of lean meat of a superior flavor. This, coupled with light weights and first class curing, gives the Canadian the top of the market.

Now just a word about feeding. If I am not mistaken, I think that perhaps 90 per cent. of you cook your pig feed—am I not right? If so, I beg to suggest that you drop the practice; it is a useless one, and calls for considerable labour without a corresponding gain. If you are feeding small potatoes, feed them whole and raw. If turnips, pulp them up, and if pumpkins, jump on them. Now, don't run away with the idea that pigs will fatten on potatoes, turnips or pumpkins. Of course they contain nourishment, but their greatest value lies in the health-giving properties they contain; the effect they have on the stomach and its contents. Generally, a far too large proportion of these vegetables are fed, especially when cooked; the cracked grain is pounded into the freshly boiled potatoes, and the pig is compelled to eat a lot more potatoes than it wants in order to get the grain that is mixed in. The superfluous potato is wasted, beside becoming a burden on the digestive system.

To sum up : Grow more pigs ; market early and often ; avoid the fall markets ; and feed raw food with less labour.

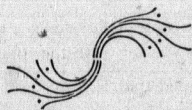
Now, gentlemen, in conclusion I wish to say that I heartily wish I could be with you at your annual convention, but that is impossible this time, and I hope that if I have not made myself sufficiently plain in the foregoing remarks, that you will write the Co-operative Farmer, and I shall be glad to reply to best of my knowledge and experience.

Wishing your meeting every success, I beg to remain,

Very sincerely yours,

H. B. HALL.

Roseneath, Gagetown, N. B.,
18th Jan., 1897.



MEETING OF EXECUTIVE.

MIDDLETON, JAN. 28TH, 1897.

Present—President Parker, J. Rufus Starr, Wm. Corning, F. R. Trotter, Col. W. M. Blair and C. R. B. Bryan.

The election of a Secretary-Treasurer was the first business before the Executive. Paul C. Black was re-elected to this office at the same salary as heretofore.

The President, J. Rufus Starr and the Secretary were appointed as publishing committee.

Moved by Col. Blair, and seconded by Mr. Bryan, that the President, J. Rufus Starr, and the Secretary-Treasurer be Finance Committee to examine and pass delegates' accounts, etc. Passed.

A discussion took place with reference to the printing of the Annual Report. This was left with the committee named above.

Moved and seconded that Col. Blair's expenses at this Convention be paid, he having been specially invited by the Executive. Carried.

Moved and seconded that Chas. Churchill, Brooklyn, and L. J. Sims, Plymouth, Yarmouth County, be paid five dollars (\$5.00) each for having prepared papers for the programme of this meeting. Passed.

Committee adjourned.

PAUL C. BLACK,
SECRETARY.

TREASURER'S REPORT, 1895-96.

RECEIPTS.

Balance from late Farmers' and Dairymen's Ass'n.....	\$ 18.41
Membership Fees for 1895.....	7.00
" " for 1896.....	23.50
Government Grant, 1895.....	1,000.00
" " 1896.....	700.00
Amount returned by Wm. Roy (delegate overpaid)....	1.88

Total.....\$1,750.79

DISBURSEMENTS.

1895. Expenses Delegates at Antigonish meeting,	
July, 1895	\$ 199.28
" Executive Meeting, Aug. 1895.....	143.68
" By-Law Committee, November, 1895.....	37.15
Expenses Executive Meeting, Nov., 1895.....	204.50
" " " Dec., 1895.....	142.85
Seal.....	5.00
1896. Expenses Kentville Meeting, Jan., 1896.....	240.81
Coöperative Farmer, Advertising.....	10.00
Western Chronicle, ".....	1.50
Advertiser, ".....	3.00
Hall Rent at Kentville.....	10.00
W. H. Huggins, Stenographic Report.....	35.00
Expenses Executive Meeting, March, 1896.....	133.65
J. J. Anslow, Printing.....	16.75
Tribune, ".....	3.00
Expenses Summer Meeting, Cape Breton, July,	
1896	198.54
Coöperative Farmer, Advertising.....	3.00
Expenses Executive Meeting, Sept., 1896.....	101.12
Secretary's Salary, 18 mos., July, '95 to Dec. '96.....	225.00
S. C. Parker, Expenses.....	2.00
Postage, Stationery, Telegrams, for 18 months.....	27.32

Total.....\$1,743.15

To Balance carried down.....7.64

\$1,750.79

To Balance on hand, Jan., 1897.....\$7.64

PAUL C. BLACK,
Sec'y-Treasurer.

Submitted and approved at last annual meeting.

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