MACDONALD COLLEGE

PHYSICS DEPARTMENT

RAILWAY STATIONS, EXPRESS AND TELEGRAPH OFFICES:
STE. ANNE DE BELLEVUE, QUE.

POST OFFICE:
MACDONALD COLLEGE, QUE., CANADA.

January 17th, 1930;

The Principal,
McGill University,
Montreal, Que.

Dear Sir Arthur:-

The Ministry of Agriculture of Great Britain has just published a lengthy report on an Empire Conference held in London last August, in which the value of exact Meteorological data to Agricultural Research is greatly emphasised.

For some years now I have made attempts to organise a small meteorological station at Macdonald College but there has been no money available. I also wrote to the Director of Meteorological Service of the Dominion to inquire whether his department would be interested in the establishing of a station here but received a very vague reply.

The thought has just occured to me that an inquiry from you would elicit a more definite response.

The scheme as worked out in Great Britain is that the Ministry supplies the complete equipment of apparatus on loan to the Colleges, the College being responsible for their maintenance, and the observations are forwarded to the Ministry at regular intervals for incorporation in their reports.

Such meteorological observations, to be of any use, must be exact and must extend over a considerable interval of time. Even if no immediate correlation can be established between crops and weather at the present stage of Agricultural Scientific development, yet it is quite certain that in a few years time such correlations will be established and exact records will prove very valuable.

The important factors I think will be
(1) Temperature of soil (a) at surface
(b) at depth of 8 inches
(c) at depth of 12 inches.
(2) Hours of sunshine
(3) Intensity of sunshine
(4) Direction and Velocity of Wind
(5) Relative Humidity of Air
(6) Precipitation

To my mind one of the most important factors in Agriculture is (1), as not only is the seed affected by the temperature

The Principal,
McGill University.

Jan. 17th, 1930.

but the activity of the micro-organisms in the soil is affected also.

The first observations of ground temperatures by an electrical thermometer were carried out by Professor Callendar (former head of Physics Department at McGill) under the McGill Campus several years ago. The same method has more recently been applied at the University of Saskatchewan.

If it were possible to get the Meteorological Department sufficiently interested to lend us the necessary apparatus, then we could undertake this work without much expenditure to the College.

At the present time this department gets no money for research work of any type and consequently the scheme will be out of the question unless some financial aid is available.

Should you consider this scheme worthy of fuller consideration, I shall be pleased to wait upon you with more exact details.

Yours sincerely,

W. C. Quayle.

W. C. Quayle,

Head of Physics Department.

WCQ/MB

To Dean Barton,
For comment and return please.

20/1/30

23rd January, 1930.

Professor W. C. Quayle,
Macdonald College, Que.

Dear Professor Quayle,

In reply to your letter of the 17th instant, I am attaching herewith a copy of the letter I have had from Dean Barton, to whom, naturally, I referred your communication.

I am not at all indifferent to research work in which your Department can co-operate, and I shall help and encourage whenever it is possible for me to do so. However, I respectfully suggest that you take up the matter with your Dean; and, also, I would like you to be able to assure me that you had consulted Dr. Eve, the Chairman of the Department of Physics for the whole University.

I shall be glad to hear more on the subject.

Ever yours faithfully,

Principal.

FACULTY OF AGRICULTURE
OFFICE OF THE DEAN

MACDONALD COLLEGE

RAILWAY STATIONS, EXPRESS AND TELEGRAPH OFFICES:
STE. ANNE DE BELLEVUE, QUE.

POST OFFICE:
MACDONALD COLLEGE, QUE., CANADA.

January 21st, 1930.

Sir Arthur W. Currie, G.C.M.G.,K.C.B.,
Principal and Vice-Chancellor,
McGill University,
Montreal, Que.

Dear Sir Arthur:

I am returning herewith the letter which you received from Professor Quayle, and forwarded to me for comment.

If Professor Quayle had approached me, I could have informed him that Macdonald College has been a sub-station of the Meteorological Service of the Dominion since 1907, and has reported to the Central Station at Toronto on temperatures, precipitation and weather conditions. Daily and monthly weather reports are received, as are also monthly records. The apparatus was supplied to the College and has been in charge of the Horticulture Department. Records of sunshine and velocity of wind are taken at various stations in this service and while application was made some time ago to have apparatus for collecting such data established here, reply was made that since other main stations in the district, including Montreal, were equipped to supply such information,it would be of no advantage to the Meteorological Service to have further data on these from here.

The matter of soil temperatures I believe is of importance and is something that has been discussed in our Committee on Soil Research. Temperatures taken of soil at Macdonald College alone, however, I fear would not be of any great value in connection with the projects at present under way.

Yours faithfully,

H. Barton

DEAN.

HB/Y
ENCL/

MACDONALD COLLEGE

PHYSICS DEPARTMENT

RAILWAY STATIONS, EXPRESS AND TELEGRAPH OFFICES:
STE. ANNE DE BELLEVUE, QUE.

POST OFFICE:
MACDONALD COLLEGE, QUE., CANADA.

January 27th, 1930.

Sir A. Currie, G.C.M.G., K.C.B.
Principal & Vice-Chancellor,
McGill University,
Montreal, Que.

Dear Sir Arthur:-

I thank you for your kind reply and in order to dissipate any misconceptions which may have arisen should like to state the following facts.

It is my practice to submit my problems to the Physics Department at McGill for their criticism and advice. Dr. Eve has been good enough to invite me on more than one occasion to deliver a paper on Soil Physics before the Staff Society.

This particular question of Meteorological Records has been discussed not only with members of the McGill Department but is considered a question of considerable importance by the Botany, Entomological and Parasitological, and Chemical Departments here.

Ever since the Committee on Soil Research was established three years ago, I have been advocating the establishing of a meteorological station commensurate with the dignity of McGill. At present we are classed in the Reports of the Meteorological Department with primitive stations like Tadousac. Our equipment, the same as it was in 1907, consists of an ordinary thermometer (Maximum and minimum) and a simple rain gauge which is read by an untrained assistant morning and evening.

On the other hand Guelph and Ste. Anne de la Pocatiere are classed as important stations and supply data on the following.

(1) Barometer Height
(2) Temperatures
(3) Relative Humidity (Guelph only)
(4) Winds (Guelph only)
(5) Precipitation
(6) Hours of sunshine

The question of soil temperatures has been brought up at every meeting of the Soil Committee, and after three years has arrived at the stage of inquiring of the cost of installing an automatic recorder.

Sir A. Currie. January 27th, 1930.

I must confess to a certain surprise at Dean Barton's remarks. There was no need to approach him for information which I already possessed. As he had been present at most of the meetings of the Soil Committee, knew my views and had expressed very strongly before the Faculty that Physics could yield very little of value in Agricultural Research, I naturally concluded that there was no use in pursuing the matter with him any further. In addition, he had advised me to look to McGill for assistance.

I shall be most happy to take the matter up with him again if he should feel disposed, lay before him the evidence from the other departments regarding the great need of having such meteorological data, and discuss the methods by which we might hope to enlist the co-operation not only of the Dominion Meteorological Department but also of the Imperial Agricultural Research Committee.

I shall also make it my business to discuss the Physical aspects of the case with Dr. Eve and his staff in the near future.

I conclude by quoting Resolutions numbers 20 and 21 of the Report of the Conference of Empire Meteorologists (Agricultural Section)

20 "Instruction in the methods and results of agricultural meteorological research should form a more important part of the curriculum, than is the case at present, at University Departments of Agriculture, Agricultural Colleges, and Farm Schools."

21 "Experimental and demonstrational work, particularly that on cultivation operations, manuring, and varieties of crops, should be accompanied by adequate meteorological observations, since such experimental and demonstrational work loses much of its value unless the results are discussed in the light of the meteorological conditions experienced during the course of the work."

As the one who teaches the science of Meteorology in this College, I am naturally very interested in the practice. What I am attempting to advocate is the installation of a set of instruments which will make <u>automatic</u> and <u>continuous</u> records of meteorological data.

I have the honour to be

Yours respectfully,

W. C. Quayle,
Professor of Physics.

WCQ/MB

MACDONALD COLLEGE

RAILWAY STATIONS, EXPRESS AND TELEGRAPH OFFICES:
STE. ANNE DE BELLEVUE, QUE.

POST OFFICE:
MACDONALD COLLEGE, QUE., CANADA.

PHYSICS DEPARTMENT

January 18th, 1929.

Dr. C. F. Martin,
Vice-Principal,
McGill University,
Montreal, Que.

Dear Dr. Martin:-

Shortly after my appointment as Head of the Physics Department in Macdonald College, I was requested by the Principal to take over the work of the existing Department of Mathematics. This latter department has thus lost its identity by being merged with the Physics Department. I have personally taught all the Mathematics given in the Faculty of Agriculture for the last four years and have completely reorganized the course.

From the present trend of events it is obvious that in the near future there will be a demand for a longer course in Mathematics. It therefore would appear desirable to bring to notice the dual nature of the work of the Physics Department.

I should be very grateful for your advice as to the correct procedure to be adopted in order to have my mathematical duties officially recognised in the McGill Calendar.

If I might make a suggestion, I should like to see the department named the Department of Physics and Mathematics and my official title changed to indicate the dual nature of my duties.

Yours sincerely,

W C Quayle

W. C. Quayle,

Professor of Physics.

WCQ/MB

Take up

31st January, 1929.

Professor W. C. Quayle,
Macdonald College,
Ste. Anne-de-Bellevue, P.Q.

Dear Professor Quayle,

I have your good letter of the 18th instant, and have already taken up the matter of your appointment with those in authority.

Within the next week or ten days, I hope to be out at Ste. Anne's, and will be able to take up the matter with you personally and with your Dean, and I trust we shall be able to come to some satisfactory result with reference to your title and recognition in the Department.

Yours sincerely,

Acting Principal.

MACDONALD COLLEGE

RAILWAY STATIONS, EXPRESS AND TELEGRAPH OFFICES:
STE. ANNE DE BELLEVUE, QUE.

POST OFFICE:
MACDONALD COLLEGE, QUE., CANADA.

PHYSICS DEPARTMENT

February 2nd, 1929.

Dr. C. F. Martin,
Acting Principal,
McGill University,
Montreal, Que.

Dear Dr. Martin:-

I am in receipt of your kind letter of the 31st ultimo, for which I wish to thank you very much.

Yours sincerely,

W. C. Quayle,
Professor of Physics.

WCQ/MB

MACDONALD COLLEGE

PHYSICS DEPARTMENT

RAILWAY STATIONS, EXPRESS AND TELEGRAPH OFFICES:
STE. ANNE DE BELLEVUE, QUE.

POST OFFICE:
MACDONALD COLLEGE, QUE., CANADA.

The Principal
McGill University,
Montreal, Que.

Dear Sir Arthur:-

Some weeks ago I approached Dean Barton for adivce as to the strictly constitutional way of making a formal application for housing accomodation. On his advice I left the matter entirely in his hands and at his suggestion wrote a letter to him embodying certain plans which might be carried out to enable my requirements to be met.

I was greatly disappointed to be told that the College could do nothing for me but to recommend me to seek accomodation in the village.

Upon thinking the matter over I decided to consult with Mr. Ward and we came to the conclusion that with a little re-arrangement of the existing facilities it might be possible to accomodate me.

I am very reluctant to go into the village to live not only from financial reasons but also from social ones. I have always been led to understand that housing accomodation was regarded in the light of an augmentation of salary. The house of my predecessor, Dr. Lynde, is I believe being reserved for the new head of the department of Plant Pathology and the house of the member of the Horticulture Department who has just resigned is being reserved for a new member of the staff of the School for Teachers.

Two years ago I was granted an apartment in the Men's Residence and invited Dr. Du Porte to live with me. Would it be possible for me to retain this apartment until conditions really warrant my relinquishing it? If that is not possible would three rooms in the former

house of Dr. Harrison be regarded as an alternative? At present it is occupied by a number of stenographers and two teachers of the High School.

I have had a long talk with Mr. Ward on this question and he agreed that it did not seem necessary for me to go outside the College. I understand that Mr. Ward is going to mention the matter to you.

If you have a few minutes at your disposal next time you are out at the College I should be very grateful for the opportunity of laying my case before you.

Yours sincerely.

W C Quayle

W. C. Quayle,
Professor of Physics.

COPY. for Sir Arthur Currie

February 6th, 1928.

Professor W.C. Quayle,
College.

Dear Professor Quayle:-

Your request to increase your housing accommodation has been discussed with Sir Arthur Currie and I am instructed by him to advise you that at present it is not possible to give you any assurance that the College will be able to provide further accommodation for you this year.

The question of room in the Residence for men students is likely to become more pressing, consequently staff accommodation cannot very well be increased. Moreover, with the Residence fully occupied, it is not considered desirable to have married people living in it.

Your suggestion that an apartment might be arranged in the Main Building was considered but was not regarded favorably.

It is expected that a survey of the accommodation possibilities for both staff and students will be made in the near future and while some further accommodation may be arranged, it seems doubtful if much can be done for housing families. Under the circumstances, therefore, it may be necessary for you to obtain accommodation outside the College until you can be accommodated on the campus. Should an apartment or family residence become available, you will be advised accordingly.

Yours faithfully,

DEAN.

HB/Y

MACDONALD COLLEGE

CHEMISTRY DEPARTMENT

RAILWAY STATIONS, EXPRESS AND TELEGRAPH OFFICES:
STE. ANNE DE BELLEVUE, QUE.

POST OFFICE:
MACDONALD COLLEGE, QUE., CANADA.

September 22nd, 1927.

Sir Arthur Currie,
McGill University,
Montreal.

Dear Sir Arthur:-

I was very glad to learn from Mr. Nichols that you had been good enough to offer him the appointment in this department. I am deeply grateful for your kindly interest in the Physics Department at Macdonald, and I assure you that I shall do all in my power to make the department worthy of that interest.

I learned from Dean Barton yesterday that Mr. Nichols would be unable to leave Edmonton before January next and the question was raised as to whether we could wait that long. The principal objection to the delay came, I believe, from the authorities of the High School. I have talked over the matter with Mr. Cook, the Principal of the High School, and after considering the situation as fully as possible I have come to the conclusion that I am quite prepared to undertake myself the extra burden of the teaching for the High School until January.

I am very anxious to have Mr. Nichols associated with me here for three reasons, firstly, he is a McGill graduate, secondly, he is well known not only to myself, but to his former associates in the Physics Department of McGill, and thirdly, his extra-academic accomplishments such as music would be, I believe, of extreme value to the College.

Should you be visiting Macdonald some time in the near future, perhaps you could spare a few minutes of your valuable time for a brief discussion of the situation with Dean Barton and myself.

Again thanking you for your consideration.

Yours very sincerely,

W C Macdonald

Professor of Physics.

To Dean Barton.
23/9/27 For your comment please. A W Currie

MACDONALD COLLEGE

FACULTY OF AGRICULTURE
OFFICE OF THE DEAN

RAILWAY STATIONS, EXPRESS AND TELEGRAPH OFFICES:
STE. ANNE DE BELLEVUE, QUE.

POST OFFICE:
MACDONALD COLLEGE, QUE., CANADA

September 27th, 1927.

Sir Arthur Currie, G.C.M.G.
Principal, McGill University,
Montreal, P.Q.

Dear Sir Arthur:-

I am returning herewith Professor Quayle's letter in regard to the work in Physics.

As I explained to you, the teaching for the High School and supervision in the Men's Residence were important considerations in arranging the position which was offered to Mr. Nichols. The residence supervision, I feel, must be provided this term, consequently, I have already taken steps to arrange with a member of our present staff to undertake it for this year. In any case, I would not care to make a change in the middle of the session, so that the residence consideration should not apply if the matter is reopened with Mr. Nichols. In addition to the salary offered to Mr. Nichols, he was to receive special room accommodation, free, on account of residence duties. The regular room accommodation is valued at $150.00. The final offer to him, therefore, represented at least $2,900.00. This amount appears to me to be high for a second position in Physics alone, since Physics is not one of our major departments. It now seems possible to take care of this term's requirements through an arrangement with Dr. Eve for demonstrator help for two afternoons a week. Since, however, Professor Quayle is anxious to have Mr. Nichols and is willing to undertake the school work, and since if Mr. Nichols arrives in January the cost will be somewhat reduced for this year, I am willing that he should come if you feel that we would be well advised in approaching him again.

Yours faithfully,

H. Barton
DEAN.

HB/Y
Enclo/

TEACHING PERIODS.

First Term.

		Lects.	Labs.
Graduates	- No. of lectures per week.	1	
4th Year	- " " " " "	1	
3rd Year	- " " " " "	1	
	No. of labs. per week		1
2nd Year	- No. of lectures.	2	
	" " labs.		1
1st Year	- No. of lectures.	4	
	" " labs.		1
B.H.S. 4th Year.	- No. of lectures.	1	
	" " labs.		1
Senior Ads.	- No. of lectures.	1	
	No. of labs.		1
		11	5

Diploma Course

2nd Year	No of Lectures	1	
	" " Labs		1
1st Year	No of Lectures	2	
		14	6

GRADUATE SCHOOL.

Photography	Three lectures.
Biomathematics.	One lecture per week for whole year.

FOURTH YEAR AGRICULTURE.

Physical Measurements.	One lecture and One lab. period per week for one term.

THIRD YEAR AGRICULTURE.

Soil Physics.	One lecture and one lab. period per week for one term.

SECOND YEAR AGRICULTURE.

Light.	Two lectures and one lab per week for one term.
Electricity.	Two lectures and one lab. per week for one term.

FIRST YEAR AGRICULTURE.

Mechanics.	One lecture and one lab per week for whole year.
Heat.	" "
Mathematics.	Two lectures per week for whole year.

SCHOOL OF HOUSEHOLD SCIENCE.

B.H.S. - 4TH YEAR.

Physics.	One lecture and one lab for one term.

SENIOR ADMINISTRATION.

Physics.	One lecture and one lab for one term.

JUNIOR ADMINISTRATION.

Physics.	One lecture and one lab for one term.

P.T.O

Diploma Course

2nd Year — One Lecture and one lab per week for term

1st Year — Two Lectures per week for one term

Gesti

Mr. Quayle

Asst Prof

Teaching. Lab

14 hrs. 6.

5 hrs a week.

(mathematics)

---

9 hrs. 6. Pure Physics

Considers this too much

Says he would not mind carrying on. If he knew something of the future status of the Dept. suggests really increased grant and pay and will wait for council and

MACDONALD COLLEGE

PHYSICS DEPARTMENT

RAILWAY STATIONS, EXPRESS AND TELEGRAPH OFFICES:
STE. ANNE DE BELLEVUE, QUE.

POST OFFICE:
MACDONALD COLLEGE, QUE., CANADA.

November 14th, 1927.

Nov. 21st
Saw Mr. Nichols at Macdonald today. Dean Barton present

The Principal,
McGill University,
Montreal.

Dear Sir Arthur:-

I was very disappointed to learn that Mr. Nichols had received a very attractive offer from Dean Boyle and had consequently decided to remain there. It is, of course, easy to be wise after an event, but I feel that the negotiations might have had a more satisfactory conclusion, if what is sometimes termed "professional etiquette" had been more strictly observed.

Mr. Nichols, as you will remember, accepted the post, but was unable to begin work until January. ~~He was~~ told without consulting me, that we could not wait until then, although I had distinctly stated that I was prepared to carry on until he could come. When he was approached again it was too late, for he had then accepted this other offer.

The position at present is that I am now faced with the task of finding a man for next January. I have written to the heads of the Physics Departments of McGill, Toronto and Queen's, but my efforts are rather handicapped by the fact that I am unable to give any very definite details as to the salary and status which will accompany the post. After consultation with Dean Barton I am left with an impression that funds for this purpose will be obtained reluctantly. It is this question which I should like to see cleared up.

For the last three years I have run this department absolutely alone. In addition to the regular Physics work, which, by the way, was increased, I was asked to take over the Department of Mathematics, formerly conducted by Mr. Percival. This year I have agreed to take over the High School Physics, and to this has been added a greatly increased Winter Course programme. My contention is that there appears to be little appreciation of the amount of work involved in discharging these obligations.

Some little time ago I suggested to Dean Barton that I should like the opportunity to discuss this matter at your next visit to the College, and perhaps you will recall that in reply to my letter you very kindly consented to do this. The provision of adequate assistance and the considerations of future development of the Physics Department are, I might venture to say, in the category of necessities rather than of remote contingencies.

It may be that my requests are considered to be unreasonable. If this be so, I should welcome the opportunity of submitting them for the criticism of the Physics Department of McGill and also to members of this Staff. I am at present engaged in an attempt to compile the average number of teaching hours per man in each department, in order to illustrate the great differences which exist - differences which have been accentuated by recent appointments.

I hope I do not give the impression of being too vociferous, or that I infringe upon the usual rules of procedure. You were good enough to inform me that you were always ready to discuss such matters. There is no doubt that a frank discussion would dissipate the present feeling of discouragement, and even though immediate relief was not possible, yet the knowledge that the difficulties were sympathetically appreciated would result in renewed enthusiasm.

There is another matter needing immediate attention. At the present moment we have the opportunity of procuring probably the highest grade optical craftsman in Canada for the College at practically no expense. He has agreed to come to this department for $1.00 an hour for the first six months, in the hope that he will be placed then on a salary basis if he can prove that this venture will be practically a self-supporting one. It is proposed that he should undertake the optical repair work for not only the whole of the University, but also for other universities. I called a meeting here recently to discuss the matter, at which Dean Barton and Mr. Ward were present and they were all satisfied that it would be a good idea. I then wrote to the heads of the scientific departments at McGill and received commendations of Mr. Gowlland (the workman in question) and promises of co-operation. The Medical School in particular, for which Mr. Gowlland has done much work, was enthusiastic over the scheme. I have full details of the scheme, which I could lay before you if necessary. If the matter is delayed too long, there is a danger of losing the chance.

Mr. Gowlland seems certain that very soon the work shop would be practically self-supporting. At present all optical apparatus from the University is sent away for repair, involving much loss of time and expense. We have had great trouble with microscope repair work here, the instruments returning after many months in a condition worse than they were before they were sent. Besides optical work, Mr.

Gowlland will be able to undertake all the mechanical repairs of instruments.

I have the honour to remain

Yours obediently,

W.C. Quayle

(W.C. Quayle,)

Professor of Physics.

JH.