

NOVA SCOTIA AGRICULTURAL COLLEGE

1968 - 1969



APPLICATION FOR ADMISSION

(To be used only by a candidate who is applying for admission as a new student.)

NOVA SCOTIA AGRICULTURAL COLLEGE

Date.....

Name in full.....

Address.....

Birth day..... Religious Denomination.....
Day Month Year

Next of Kin..... Relationship.....

Address.....

Are you a close relative of a former student? If so, please give the name, degree of relationship, and, if possible, the year of the former student.....

If you were not in high school during the 1967-68 school year, what educational institution or institutions have you attended since you were in high school?.....

Course Desired:

First Year Technician: Agricultural Business.....

Animal Science.....

Plant Science.....

Agricultural Engineering.....

First Year Degree.....

Applications for admission to the first year of the Degree Course will not be considered until an official transcript of matriculation marks has been submitted.

Applications for admission to the first year of the Technician Course will not be considered until an official transcript of the required marks (provincial or school) has been submitted.

What high school did you attend?.....

State practical farm experience, giving name and address of employers

Before signing this application form, I have noted the rules and regulations of the College.

Signature of Applicant.....

Signature of Parent or Guardian.....
(Required only if applicant is under 21)

Questions to be answered and form returned to:

THE REGISTRAR

THE NOVA SCOTIA AGRICULTURAL COLLEGE

TRURO

SIXTY-THIRD ANNUAL

CALENDAR

OF THE

NOVA SCOTIA
AGRICULTURAL COLLEGE
TRURO

UNDER

The Nova Scotia Department
of Agriculture and Marketing

1968 - 1969

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1968

JULY

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SEPTEMBER

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1969

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CALENDAR FOR SESSION 1968-1969

1968

September 3-17	Refresher course— First year Technician students
September 16-18	Supplemental examinations
September 18	Registration—First year students
September 19	Registration— Second and third year students
October 14	Thanksgiving day. No classes
November 11	Remembrance day. No classes
December 12	Last day of classes, first term
December 14-20	First term examinations

1969

January 6	Second term lectures begin at 8:30 a.m.
April 4-7	Easter weekend. No classes
April 24	Last day of classes, second term
April 26-May 2	Final examinations
May 7	Graduation exercises

Trueman House and Chapman House will be open as follows:
—for students who have to write a supplemental examination, after dinner on September 15;
—for all others, after dinner on September 17.

Any student who wishes to use the facilities of Trueman House before the times set down will be charged at the rate of \$5.00 per day.

Registration consists of presenting a medical certificate dated not more than thirty days before registration day, and of paying fees and tuition and, if applicable, the first board and lodging instalment. No student will be registered without fulfilling these requirements and no student who is not registered will be permitted to attend classes.

A student who registers late must have permission from the Principal and will be required to pay a penalty of \$5.00 per day for each day he is late.

OFFICERS OF ADMINISTRATION

Principal

W. A. JENKINS, B.Sc. (Agr.) (McGill), M.Sc. (Cornell),
Dr. P.A. (Harvard)

Vice-Principal

J. E. SHUH, B.S.A. (Toronto), M.Sc. (McGill)

Dean, Vocational and Technical Training

A. D. ELLS, B.Sc. (Agr.) (McGill), M.A. (Acadia)

Registrar

PARKER COX, B.A. (Acadia), M.A. (Toronto)

Librarian

I.M. FRASER, B.Sc. (Dalhousie), M.A. (Maine)

Dean of Residence—Chaplain

REV. D. I. MacEACHERN, B.A. (Mt. Allison),
B.D. (Pine Hill)

Business Manager

R. F. McEWAN

Secretary

MRS. ISABEL D. FORBES

Nurse

MRS. AGNES YUILL, R.N.

FACULTY COUNCIL

Principal

W. A. JENKINS, B.Sc. (Agr.) (McGill), M.Sc. (Cornell),
Dr. P.A. (Harvard)

Agricultural Engineering

G. E. TOWNSEND, B.Sc. (Agr.) (McGill)

Assistant Professor

J. T. MacAULAY, B.S.A. (Toronto), B.E. (Nova Scotia
Technical College), M.Sc. (Guelph), P.Eng.

Assistant Professor

Agronomy

J. E. SHUH, B.S.A. (Toronto), M.Sc. (McGill)

Professor

J. S. BUBAR, B.Sc. (Agr.) (McGill), M.S. (Penn. State),
Ph.D. (McGill)
Associate Professor

Animal and Poultry Husbandry

S. L. CURTIS, B.S.A. (Toronto), M.Sc. (Massachusetts),
Ph.D. (Minnesota)
Associate Professor

D. R. MacDONALD, B.Sc. (Agr.) (McGill)
Assistant Professor

R. J. HUGGARD, B.Sc. (Agr.) (McGill), M.S.
(Illinois)
Lecturer (on loan), Livestock Superintendent

Biology

A. E. ROLAND, B.A. (Acadia), M.A. (Toronto), Ph.D.
(Wisconsin)
Professor

M. E. NEARY, B.Sc. (Agr.) (McGill)
Assistant Professor

Chemistry

W. M. LANGILLE, B.Sc. (Acadia), M.Sc. (McGill)
Associate Professor

J. E. HAWLEY, B.Sc. (Agr.) (McGill)
Assistant Professor

J. E. MILLIGAN, B.Sc. (Agr.) (McGill)
*Lecturer (on loan), Assistant Director of Agronomy
Services*

Economics and Business Management

W. A. JENKINS, B.Sc. (Agr.) (McGill), M.Sc. (Cornell),
Dr. P.A. (Harvard)
Principal and Professor

A. D. ELLS, B.Sc. (Agr.) (McGill), M.A. (Acadia)
Associate Professor

W. V. GRANT, B.Sc. (Agr.) (McGill), M.Sc. (Connecti-
cut)
Lecturer (on loan), Director of Extension Services

D. M. BYERS, B.Sc. (Agr.) (McGill)
Lecturer (on loan), Supervisor of Farm Management

P. R. GERVASON, B.Com. (Acadia), M.A. (University
of Alberta)
Lecturer (on loan), Economist

DOUGLAS JOSE, B.Sc. (Agr.) (McGill)
Lecturer (on loan), Farm Management Specialist

J. C. LEEFE, B.A. (Acadia), LL.B. (Dalhousie)
Lecturer

English, History and Human Relations

PARKER COX, B.A. (Acadia), M.A. (Toronto)

Associate Professor

W. J. HAWKINS, B.A. (St. Mary's), M.A. (New Brunswick)
Assistant Professor

REV. D. I. MacEACHERN, B.A. (Mt. Allison), B.D.
(Pine Hill) *Assistant Professor*

Horticulture

H. A. L. MacLAUGHLIN, B.Sc. (Agr.) (McGill), M.Sc.
(Cornell) *Associate Professor*

Mathematics and Physics

I. M. FRASER, B.Sc. (Dalhousie), M.A. (Maine)
Assistant Professor

S. G. SMITH, B.Sc. (Mount Allison)
Lecturer

Physical Education

K. S. MARCHANT, B.P.Ed. (New Brunswick)
Lecturer

Lecturers on loan are members of the staff of the Nova Scotia Department of Agriculture and Marketing.

SCHEDULE OF PAYMENTS

The College reserves the right to make changes without notice in its published scale of charges for tuition, board and lodging, and other fees. Refunds will not be made except as stated below.



All payments are to be made on the dates stated. Students are requested not to ask for a postponement. A student whose payment is ten days overdue and who has not made arrangements satisfactory to the College may be asked to withdraw.

DEGREE COURSE

Payments due September 18, 1968	
Tuition.....	\$150.
Board and lodging.....	\$260.
Caution deposit.....	\$ 10.
Students' Council.....	\$ 30.
Medical fee.....	\$ 6.
	\$456.
Payments due January 6, 1969	
Tuition.....	\$150.
Board and lodging.....	\$330.
	\$480.
Books (estimated), September 18, 1968.....	\$ 75.

TECHNICIAN AND TECHNOLOGIST COURSES

Tuition	Free to residents of the Atlantic Provinces, the governments of which are sharing the operating costs of the Technician Courses.
Payments due September 18, 1968	
Board and lodging.....	\$260.
Caution deposit.....	\$ 10.
Students' Council.....	\$ 30.
Medical fee.....	\$ 6.
	\$306.
Payment due January 6, 1969	
Board and lodging.....	\$330.
Books (estimated), September 18, 1968.....	\$ 65.

If a student withdraws during the term, except for health or other compelling compassionate reasons, he will receive no refund of the tuition fee. Any balance of board and lodging payment over and above the initial deposit of \$25.00 will be refunded.

If a student withdraws during the first week of the academic year, the Students' Council and Medical Services fees will be refunded. After the first week there will be no refund except for a withdrawal for health or other compelling compassionate reasons. After a student has withdrawn the students' Medical Fund will have no further responsibility for him.

GENERAL INFORMATION

The Nova Scotia Agricultural College was formally opened in 1905 to assume and expand the work which for several years had been carried on by the School of Horticulture in Wolfville and the School of Agriculture in Truro. The College operates under authority of an act of the legislature of Nova Scotia.

Over the years instruction has been offered at various levels: among them credits towards a degree in Agriculture, semi-vocational courses, technician courses, and vocational short courses. In 1968-69 and subsequent years, courses at the technological level will also be offered to students who have satisfactorily completed one of the technician courses or an equivalent course.

During the sixty-three years of its existence the Nova Scotia Agricultural College has had very close affiliations with the Ontario Agricultural College (now a college of the University of Guelph) and Macdonald College of McGill University, at which institutions most of its graduates from the Degree Course have completed the studies leading to a degree. In line with changes made at Macdonald College and the University of Guelph, the Nova Scotia Agricultural College is now offering three years of degree credits in advance of junior matriculation and two years in advance of senior matriculation.

A number of graduates of the Nova Scotia Agricultural College have continued their studies at the Ontario Veterinary College (now a college of the University of Guelph). Qualified



graduates from the Degree Course are considered for admission to the first year in veterinary medicine.

Commencing in 1969, graduates of the pre-engineering course at the Nova Scotia Agricultural College will be admitted without further examination by the Nova Scotia Technical College to the second last year of a course leading to the degree of Bachelor of Engineering with specialization in Agricultural Engineering.

To the student who wishes to farm, to accept employment in a farm-related industry, or to engage in professional agriculture, the College offers courses designed to better fit him for the line of endeavor he wishes to follow.

Agriculture offers to the alert man the widest possible field for study and opportunity. Its problems are a challenge to the keenest minds that can be brought to bear upon them, and it offers to many a young man the possibility of a career that will bring opportunity for useful service and distinction.

The record of the graduates of this institution, over the sixty-three years the College has been in existence, is conclusive evidence that Maritime students can obtain a sound agricultural education in the courses offered at the Nova Scotia Agricultural College, located on a 550 acre property at Bible Hill, a mile north-east of Truro, Nova Scotia.

The College is well equipped with buildings. Cumming Hall, Harlow Institute, the Agricultural Engineering building, the Horticultural Building, the Dairy Building, a new Vocational-Technical building and shop, a new Animal Husbandry building and a new barn complex provide adequate teaching facilities for all subjects offered and offices and laboratories for a large proportion of the staff of the Nova Scotia Department of Agriculture and Marketing. Trueman House and Chapman House provide living accommodations for approximately 300 male students.

The Faculty reserves the right to withhold any first year course for which less than five students apply.

The Faculty will give sympathetic consideration to any student who wishes to take a special selection of courses in order to fill a specific need.

The various courses arranged for the 1968-69 college year are listed and described elsewhere in the calendar. The Faculty reserves the right to make any revisions and additions that may be found to be necessary.

Post Office Address:

All mail should be addressed:

Nova Scotia Agricultural College, Truro, N. S.

Telephone:

Nova Scotia Agricultural College, Truro 893-4467.

Railways:

Truro is on the main line of the Canadian National Railways from Halifax to Moncton, and from Sydney to Halifax. Truro is also the terminus of the Yarmouth to Truro Dominion Atlantic Railway which serves the Annapolis Valley.

Highways:

Provincial Highways 2 and 4 lead to Truro from North, South, East and West. Number 1 Highway joins Number 2 Highway at Bedford, near Halifax.

Bus Lines:

The Acadian Coach Lines maintains a bus terminal and ticket office at Truro.

Banks:

The following chartered banks have branches in Truro:

The Bank of Nova Scotia

The Canadian Imperial Bank of Commerce

The Royal Bank of Canada

The Bank of Montreal

USE OF MOTOR VEHICLES

The operation of a motor vehicle while in residence at the College is a privilege which may be withdrawn at the discretion of the Dean of Residence.

Students in residence who bring motor vehicles to the campus or those who live in the surrounding area and are desirous of parking their vehicle at or near the residence must register the ownership of the vehicle, together with its license number, with the Dean of Residence at the opening of the academic year, or within three days after the vehicle is brought to the campus.

Limited parking space on campus is provided for student-operated vehicles west of Chapman House for a fee of two dollars (\$2.00) annually. Students are required to observe campus traffic and parking regulations. Fines are levied by the Students' Council for failure to comply with campus regulations.

Telegrams:

Branches of both Canadian National Telegraphs and Canadian Pacific Telegraphs are located in Truro.

Address all telegrams in care of:

Nova Scotia Agricultural College, Truro, N. S.

Express and Freight:

Express or freight may be forwarded to the Nova Scotia Agricultural College by either the Canadian National Railways or the Canadian Pacific Railway, since both lines maintain offices in Truro.

College Colors:

Royal Blue and Regular Gold.

Churches:

The following churches, to which students are invited, are located in Truro and Bible Hill:

Protestant—

First Baptist Church
Immanuel Baptist Church
Zion Baptist Church
St. John's Anglican Church
St. George's Anglican Church
St. James' Presbyterian Church
First United Church
Brunswick Street United Church
St. Andrew's United Church
St. David's United Church
Salvation Army
Calvary Pentecostal Church
Wesleyan Methodist Church

Roman Catholic—

Church of the Immaculate Conception

CANADA STUDENT LOANS PLAN

The government of Canada makes available to students enrolled in the Degree and Technician Courses loans up to \$1000. in one year. Application for a certificate of eligibility must be made to the issuing authority of the province of residence of the applicant.

Borrowers under the plan are required to repay principal and pay interest, but no payments are required as long as they are full time students at a specified post-secondary educational institution.

Application forms for the Nova Scotians are available at the Registrar's office. Residents of other provinces should apply to the issuing authority at their provincial capital.

RULES AND REGULATIONS

GENERAL REGULATIONS

All students are under the charge of the Principal and are responsible to him at all times for their conduct. The Principal is authorized to make such additional regulations as may be found necessary for the discipline of the College and to impose fines or other penalties for any infraction of rules and regulations.

All students are expected to attend all lectures, discussion groups, and laboratory periods, whether scheduled on the timetable or announced by the instructor. The members of the Faculty believe that a student should, for his own good, miss as few instructional periods as possible.

A student who arrives late or who is inattentive during an instructional period may be refused credit for attendance.

Students who are ill must report such illness to the Registrar at once.

Students wishing to absent themselves from classes for compassionate reasons must obtain permission from the Principal.

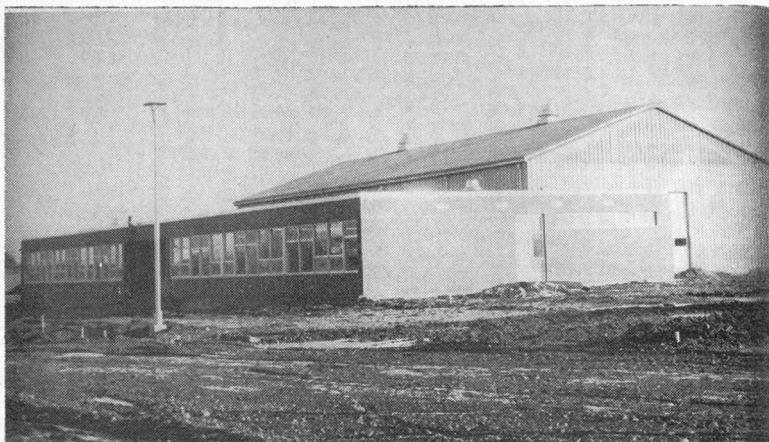
Authorized absences for students for College activities will be credited toward the required attendance.

Students must not destroy, deface, or meddle with college property.

Every student is expected to show, both within and without the college, such respect for order, morality and the rights of others, and such sense of personal honour as is demanded of good citizens and gentlemen. Students found guilty of immoral, dishonest or improper conduct, violation of rules, or failure to make satisfactory progress, shall be liable to college discipline including: suspension from classes or residence disqualification from competing for honours or prizes or withdrawal from the College.

Keeping in mind the responsibility of students one to the other, intoxicating liquors are strictly prohibited on College property.

All forms of initiation and hazing are forbidden.



RESIDENCE REGULATIONS

Students must not remove glasses, silver, dishes, or any article of furniture from the dining hall.

For the noon and evening meals on Sunday, students are required to wear a coat (jacket or blazer), and a dress shirt and tie. For noon and evening meals on week days, students must wear a sweater or coat. Details of dress regulations will be contained in the Students' Council Handbook, a copy of which will be provided to all students.

Smoking is not permitted in the Dining Room.

Nothing (pictures, banners, etc.) is to be attached to the walls of any College building.

Students will be required to provide their own towels, soap and drinking glass. Sheets, pillows, pillow cases, blankets and furniture will be provided by the College.

All clothing and towels should be marked with the owner's name.

A laundry room is available for the use of students. This room is equipped with washing machines, driers, set tubs, irons and ironing boards. No laundry will be permitted in the wash-rooms or bedrooms.

Each room is provided with a broom and dust pan. It will be the responsibility of the student to keep his room clean and tidy at all times. Rooms will be inspected daily.

No firearms are permitted on College property.

Students wishing to entertain visitors in the dining hall must purchase meal tickets from the Business Manager's office before the meal starts.

Students wishing accommodation for over night visitors in the dormitory must obtain permission from the Dean of Residence.

Students living out of residence must obey all residence rules while visiting in the dormitory.

No student may bring a lady into Trueman House without first obtaining permission from the Dean of Residence.

REGISTRATION DEPOSIT

All male students except those living at home will be required to live in one of the College dormitories unless special permission to live out has been granted by the Principal.

Students for whom a room has been reserved in a dormitory are required to pay a deposit of \$25.00, returning students before July 31 and new students as soon as they are accepted for admission.



An applicant for whom a room has been reserved and who finds it necessary to cancel his reservation will be refunded his deposit, provided that notice of cancellation reaches the Registrar's office not later than September 11.

CAUTION DEPOSIT

Every student, at time of registration, must make a cash deposit of \$10.00 with the Registrar to cover breakage. As soon as any student's deposit is exhausted, he or she will be required to make an additional deposit of the same amount.

Should any student, or students, destroy or deface college property, the cost of repairing such damage will be the responsibility of the student or students concerned.

All caution deposits are subject to a general levy for untraceable breakage and damage to buildings and equipment.

This fee, less deductions, will be refunded within two months after the closing of the College year.

MEDICAL EXAMINATION

Students at time of registration must be in possession of a medical certificate dated not more than 30 days previous to registration. If required, students must submit to further medical examinations upon request.

All candidates who are accepted will be sent a medical report form; should the form not be sent with the letter of acceptance, the candidate for admission should ask for one.

CONTAGIOUS OR INFECTIVE DISEASES

Students on holiday or accepted candidates for admission who become subject to an attack of any contagious or infective diseases, or who reside in any dwelling in which any such disease exists, shall be subject to quarantine regulations approved by the medical profession.

In all cases of students, or accepted candidates for admission, suffering from, or coming in contact with those suffering from any contagious or infective disease, a medical certificate shall be required before they are allowed to return to the College.

MEDICAL FEE

The medical fee of \$6.00 per year charged each student at registration provides for him free doctor's attendance during the college year. It does not provide for drugs, hospitalization, or operations requiring hospital care.

RAILROAD FARES REFUNDED

Students from the Province of New Brunswick taking any two-year course will have one return railroad fare refunded to them each year by the New Brunswick Department of Agriculture. Such refund will be made at the close of the second term, provided that they have passed the requirements for the year. No application is necessary.

STUDENT GOVERNMENT

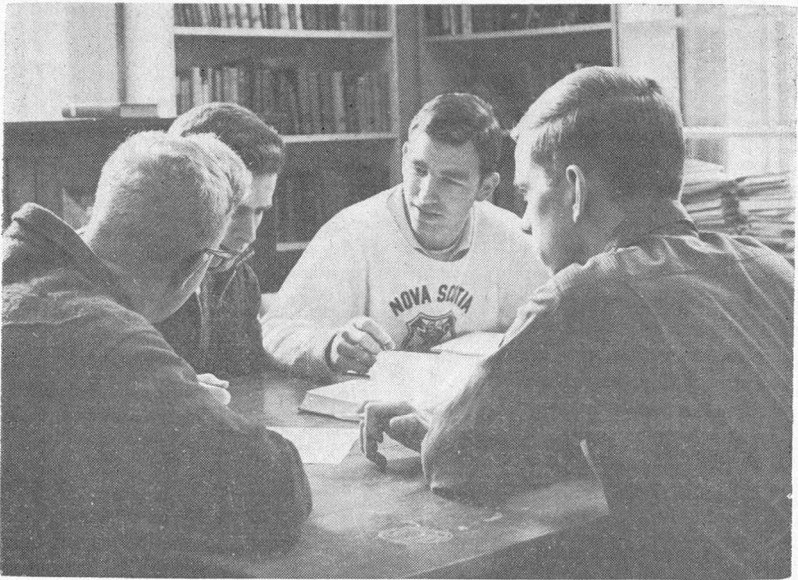
Through a system of self-government students are encouraged to accept the greatest possible amount of responsibility in connection with their own affairs. Only students taking regular courses are allowed to act as executive members of the Students' Council, or as members of student committees.

A committee of Faculty members, appointed by the Faculty to act in an advisory capacity, cooperates with student committees on financial, literary, social and athletic affairs in order that every possible benefit may be derived from such activities.

SOCIAL

The Students' Council each year appoints a Social Committee which directs the social activities of the College. Informal dances are held at regular intervals. These dances are planned and supervised by the Social Committee and two or more members of the Faculty.

The churches of the Town of Truro are very friendly and extend a welcome to all students attending the Agricultural College. The churches entertain the student body on many occasions during the college year and at these functions pleasant associations are formed under very desirable auspices.



DEBATING SOCIETY

The Students' Debating Society conducts a series of inter-class debates. The champions are awarded the Nova Scotia Department of Agriculture and Marketing debating trophy. The activities of the Society are a valuable supplement to the weekly public speaking classes.

PHYSICAL EDUCATION AND ATHLETICS

All first year male students are required to attend classes in Physical Education.

Each group has two classes per week. The basic objectives of the program include the development of healthy attitudes, realization of social ends, emotional development, and recreation.

Supervised athletics are a regular part of the College program and all students are expected to participate at a level to be determined by their individual skills and abilities.

Teams represent the students in local leagues and, as much as possible, in competition with other colleges and rural high schools. An interclass program provides an opportunity to the student who so desires to play a variety of games.

All students are to be in possession of a pair of running shoes, shorts, T-shirt and two pair of heavy white socks. They are encouraged to bring with them any other athletic equipment that they have in their possession, such as soccer boots, warm-up suits, skates, etc.

ATHLETIC REGULATIONS

All students are eligible to play for teams representing the College, subject to the following exceptions:

- (a) No student who has failed in more than one subject will be allowed to play on more than one team representing the college.
- (b) No student who has more than two failures will be allowed to play on any team representing the College, excepting at the discretion of the Faculty Committee on Athletics and the individual coach concerned.

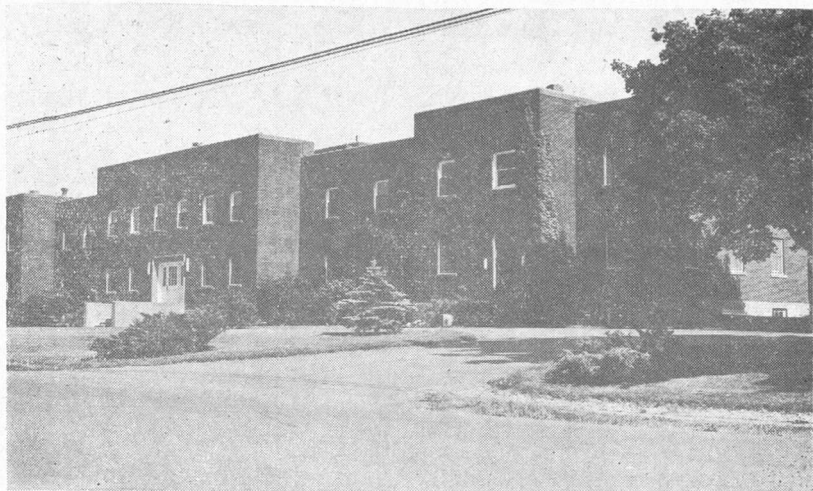
All teams or groups that go to any community or institution to participate in athletic or other activities must be accompanied by a member of the College staff.

OUTSIDE SPORTS

A student wishing to participate in athletics other than those sponsored by the College must apply in writing to, and obtain permission from, the Principal before participating either as a player or an official.

Any expenses incurred through injury while playing in outside games will be the responsibility of the student concerned, and will not be the responsibility of the students' medical fund.

Students who lose time from classes due to participating in outside games will not receive an attendance credit for the time lost.



DEGREE COURSE

The Nova Scotia Agricultural College is a junior College offering three years in advance of junior matriculation and two years in advance of senior matriculation in a course leading to a bachelor's degree in Agriculture and three years in advance of junior matriculation in a five year course leading to a bachelor's degree in Engineering (with specialization in Agricultural Engineering). Most of its graduates complete their courses at Macdonald College of McGill University, where they are admitted to the fourth year of a five year course in advance of junior matriculation, or at the University of Guelph, where they are admitted to the third year of a four year course in advance of senior matriculation; its graduates who are candidates for a degree in Engineering complete their courses at the Nova Scotia Technical College, where they are admitted to the second last year.

Qualified graduates may be considered for admission to the four year course in veterinary medicine offered by the Ontario Veterinary College of the University of Guelph.

The following options are offered to students in their last two years at Macdonald College:

Agricultural Chemistry, Agricultural Commerce, Agricultural Economics, Agricultural Engineering, Agronomy,

Animal Science, Botany, Food Management, General Agricultural Science, Horticulture, Microbiology, Plant Pathology, Soil Science and Zoological Science.

The University of Guelph offers the following agricultural majors to students in the last two years:

Apiculture, Entomology, Microbiology, Agricultural Economics and Business, Animal Science, Poultry Science, Dairy Science, Landscape Horticulture, Crop Science, Horticulture, Plant Protection, Chemistry, General Science, Wildlife and Fisheries, Land Management and Soil Science.

THE COLLEGE DIPLOMA

Students who complete the prescribed number of courses with no mark below 50 per cent of the maximum mark obtainable and who are in good standing will be awarded a diploma. The diploma confers upon recipients the status of "Associate of the Nova Scotia Agricultural College with all the rights and privileges pertaining thereto."

A high honours diploma will be awarded to a student who has made an average of at least eighty per cent and an honours diploma to a student who has made an average of at least seventy-five per cent.

ENTRANCE REQUIREMENTS

All candidates for admission must:

- (a) be sixteen years of age on or before the opening day of the College year;
- (b) be of good moral character;
- (c) present a satisfactory medical certificate dated no more than 30 days previous to registration;
- (d) present a certificate of junior matriculation standard

(Nova Scotia—Grade XI,
New Brunswick—Grade XII,
Prince Edward Island—Grade XII,
Newfoundland—Grade XI)

with no mark of less than 50 per cent of the maximum mark obtainable and an average of at least 60 per cent in:

- (a) English (two papers), Algebra and Geometry;
- * (b) two of Chemistry, Physics or Biology;
- (c) one additional academic subject.

*Where possible, the student should elect Physics and Chemistry. Applicants should understand that possession of the minimum entrance qualifications will not necessarily guarantee admission.

ADMISSION WITH ADVANCED STANDING

A candidate may be admitted to the second year of the course leading to a degree in Agriculture if he has (1) completed all the entrance requirements for the first year, and (2) has attained an average of at least 65% in senior matriculation English, Mathematics, Chemistry, Physics, and one additional subject and a mark of not less than 65% in Mathematics, Physics and Chemistry. A candidate so admitted will be required to take first year Biology in addition to the regular work of the second year.

Farm experience is desirable for all applicants and is a requirement for some options of the final two years.

SUPPLEMENTAL EXAMINATIONS

A student who fails in more than three full courses or who makes an average of less than fifty per cent on the work of an academic year may not write supplemental examinations.

Provided that the disqualifying conditions stated above are not applicable, a student who makes between thirty per cent and forty-nine per cent in any subject may write a supplemental examination. Supplemental examinations will be written at the end of June and just before registration day in September. A maximum of two supplemental examinations will be permitted in any subject. No supplemental examination will be permitted in any subject after two years have elapsed following the original failure.

Application for permission to write a supplemental examination in June must be submitted before June 10 and for permission to write in September before August 20.

The fee for the first supplemental examination will be \$5.00. Should a second examination be necessary, the fee will be \$10.00. No supplemental examination is to be written until the required fee has been paid.

**SYLLABUS
FIRST YEAR DEGREE**

	First Term		Second Term	
	Lec.	Lab.	Lec.	Lab.
Biology 100.....	3	4	3	4
Chemistry 100.....	3	4	3	4
English 100.....	4		4	
History 100.....	3		3	
Mathematics 100.....	3		3	
Physics 100.....	3	4	3	4
Physical Education.....	2		2	

SECOND YEAR DEGREE

(leading to a Bachelor of Science degree in Agriculture)

	First Term		Second Term	
	Lec.	Lab.	Lec.	Lab.
*Biology 110.....	3	4		
Biology 210.....	3	4		
Biology 220.....			3	4
Chemistry 200.....	3	4	3	4
Economics 200.....	3		3	
History 220.....			2	
Mathematics 200.....	3		3	
Physics 200.....	3	4	3	4

*Offered to students who enter with advanced standing.

SECOND YEAR DEGREE

(leading to a Bachelor of Engineering degree with
specialization in Agricultural Engineering)

	First Term		Second Term	
	Lec.	Lab.	Lec.	Lab.
Chemistry 200.....	3	4	3	4
Economics 200.....	3		3	
Engineering 200.....	1	3	1	3
Engineering 201.....	2	1	2	1
Engineering 210.....	2			
Engineering 211.....	1	2		
Engineering 220.....			2	2
History 220.....			2	
Mathematics 200.....	3		3	
Physics 200.....	3	4	3	4

THIRD YEAR DEGREE

(leading to a Bachelor of Science degree in Agriculture)

	First Term		Second Term	
	Lec.	Lab.	Lec.	Lab.
Animal Science 320.....			3	2
Biology 310.....	2	2		
Biology 311.....	3	2		
Biology 321.....			3	2
Chemistry 300.....	3	4	3	4
Economics 320.....			3	
Mathematics 310.....	3			
Plant Science 300.....	2	2		
Soil Science 310.....	3	2		
Biology 320.....			3	2
or				
Mathematics 320.....			3	

THIRD YEAR DEGREE

(leading to a Bachelor of Engineering degree with specialization in Agricultural Engineering)

	First Term		Second Term	
	Lec.	Lab.	Lec.	Lab.
Animal Science 320.....			3	2
Chemistry 300.....	3	4	3	4
Economics 320.....			3	
Engineering 300.....	2	1	2	1
Engineering 301.....	2	1	2	1
Engineering 310.....	2	1		
Engineering 320.....			2	1
Mathematics 300.....	3		3	
Plant Science 300.....	2	2		
Physics 300.....	2	2	2	2
Soil Science 310.....	3	2		

DESCRIPTION OF COURSES

The following courses are arranged for the 1968-69 academic year. The Faculty reserves the right to make any revisions or additions which may be necessary.

ANIMAL SCIENCE

320: Introductory Animal Science

An introductory course to animal husbandry production outlining general areas and populations of farm livestock past

and present, with a general view of the future possibilities. The several breeds of domestic farm animals are discussed as to origin, breeding principles, selection programs, management practices, nutritional standards, disease control, housing requirements and general principles required for economic production of farm livestock.

Animal Husbandry in this course includes the larger domestic farm animals and poultry.

3rd year, 2nd term—3 lecs. and 2 labs. per week.

BIOLOGY

100: General Biology

A study of life in terms of modern concepts of molecules, ionization, reactions, structures and processes: photosynthesis, organic compounds, energy relations, the cell, tissues, organs, systems, organisms and societies; plant and animal structure, basic metabolism, nutrition, growth, perception, reproduction, introduction to embryology, ecology, genetics and evolution.



Higher animals and plants are emphasized and a brief introduction to the plant and animal kingdoms is given.

1st year, both terms—3 lecs. and 4 labs. per week.

Text: Weisz, ELEMENTS OF BIOLOGY.

110: Basic Biology

A review of the cell and its organelles; metabolism and energy relations; growth and reproduction; genetics, evolution and ecology. The basis of life in terms of molecules and their various interactions is emphasized. The structure of higher plants and animals is briefly considered. This course is for students entering at the second-year level.

2nd year, 1st term—3 lecs. and 4 labs. per week.

Texts: FOUNDATION OF MODERN BIOLOGY SERIES: The Cell, Cellular Physiology and Biochemistry, Life of the Green Plant. Storer and Usinger, GENERAL ZOOLOGY.

210: Zoology—The Animal Kingdom

A review of the animal kingdom with reference to the structure, biology, etc. of the protozoa and various metazoan phyla; important aspects of entomology, animal parasitism, life histories, elements of vertebrate embryology, animal ecology and zoogeography are discussed.

2nd year, 1st term—3 lecs. and 4 labs. per week.

Text: Storer and Usinger GENERAL ZOOLOGY, 4th Edition.

220: Botany—The plant kingdom

A review of the plant kingdom considering the classification of plants and a study of the biology, morphology and life cycles of representatives of the algae, fungi, bryophytes and tracheophytes. Special attention will be given to the fungi, with the elements of plant pathology; and an introduction to the comparative morphology, classification and distribution of the Angiosperms is included.

2nd year, 2nd term—3 lecs and 4 labs. per week.

Text: to be announced.

310: Introduction to Genetics (Prerequisite—Biology 100 or Biology 110)

A review of cell reproduction; basic genetics; and an introduction to the modern concepts of the gene, gene action and biochemical reactions.

3rd year, 1st term—2 lecs. and 2 labs. per week.

Texts: Bonner HEREDITY; Crowe GENETIC NOTES.

311: Microbiology (Prerequisite—Biology 100 or Biology 110)

General introduction to microbiology; principles of morphology and physiology; relation of micro-organisms to fermentations, water, sewage, soil, dairy products, food and disease.

3rd year, 1st term—3 lecs. and 2 labs. per week.

Reference Texts: Carpenter MICROBIOLOGY; Umbreit MODERN MICROBIOLOGY; Stanier, Doudorf and Adelberg THE MICROBIAL WORLD.

320: Advanced Genetics (Prerequisite—Biology 310)

A detailed study of the genetic material, gene action and population genetics.

3rd year, 2nd term—3 lecs and 2 labs. per week.

Text: To be announced.

321: Cell Physiology

Functional organization of the cell, cell environment, exchange across membranes, conversion of energy and matter, irritability, growth and division.

3rd year, 2nd term—3 lecs. and 2 labs. per week.

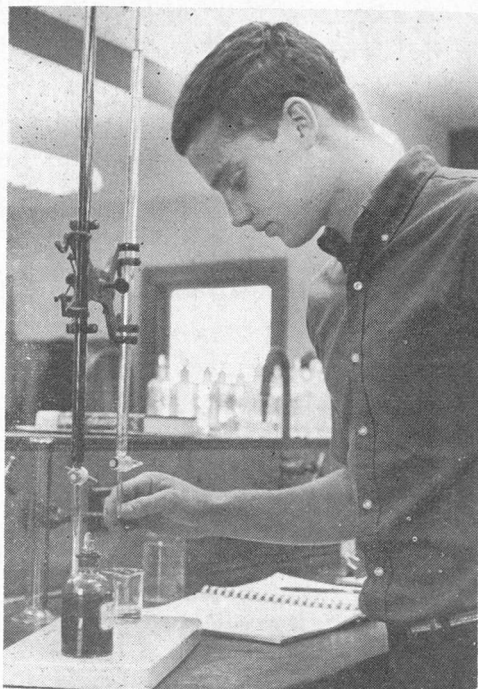
Text: To be announced.

CHEMISTRY

100: Principles of Chemistry

A course combining lecture and laboratory periods to give the student a sound background and training in chemical principles and laboratory practice.

A modern approach is used to familiarize the student with the theories and laws governing atomic structure, relating bonding, periodicity of the elements, chemical reactions and geometrical form of molecules. Chemical equilibrium, reaction rates, complexions and an introduction to organic chemistry are subjects studied in the second semester of this course.



The laboratory work is mainly quantitative in its approach with an introduction to qualitative analysis as an aid to solution chemistry involving a short period in the laboratory schedule. The laboratory work is correlated with lecture material to assist the student in relating theory and practice. 1st year, both terms—3 lecs. and 4 labs. per week.

Text: Mortimer; CHEMISTRY: a conceptual approach. Laboratory manual—mimeographed outlines.

200: Organic Chemistry (Prerequisite—Chemistry 100)

A lecture and laboratory course designed to give the student an appreciation of and an introduction to Organic Chemistry. Introduction to a number of important basic classes of organic compounds including the alkanes, alkenes, alkynes, petroleum and petrochemicals, cycloparaffins, alcohols, aldehydes, ketones, alkylhalides, monocarboxylic acids, acid halides, acid anhydrides, salts, amides, ethers, amines, aromatics and

aromatic derivatives, heterocyclics, etc. Introduction to reaction mechanisms and reaction intermediates.

An introduction to Biochemistry including optical activity, carbohydrates, lipids (fats and oils), amino acids and proteins, etc.

Laboratory work including the preparation, isolation, purification and study of a number of important "organics" discussed in lecture and emphasizing material and teaching with techniques, skills and philosophies involved in carrying out experimental work in Organic Chemistry.

2nd year, both terms—3 lecs. and 4 labs. per week.

Text: Bonner and Castro; **ESSENTIALS OF MODERN CHEMISTRY**. (1st edition 1965)

Laboratory Manual-Mimeographed Material.

Some suggested reference books:

1. Cram and Hammand—Organic Chemistry (2nd edition)
2. West and Todd—Textbook of Biochemistry (latest edition)
3. Noller—Chemistry of Organic Compounds (3rd edition)
4. Smith and Crystol—Organic Chemistry (1966)

300: Introductory Biochemistry (Prerequisite—Chemistry 200)

This course utilizes modern concepts to deal with the biological functions of carbohydrates, lipids, amino acids, proteins, nucleic acids, digestion, absorption of digestion products, and other constituents and processes of living matter. The enzymology and intermediary metabolism in bacteria, plants and animals is also an important part of the course.

The laboratory is used to correlate and emphasize material referred to in the lecture periods.

3rd year, both terms—3 lecs. and 4 labs. per week.

Text and laboratory procedures to be selected.

ECONOMICS

200: Principles of Economics

This course is an introduction to the study of Economics. It is designed to acquaint the student with the main elements of economic theory, and their application and relevance in our complex modern society. Major sections of the course are: Basic Concepts, together with Straight Thinking in Economics; National Income, Employment and Economic Growth; the

Price System and the Allocation of Resources; International Trade; Money, Banking and Public Finance.

2nd year, both terms—3 lecs. per week.

Text: Bach, ECONOMICS.

320: Economics of Agriculture (Prerequisite—Economics 200)

A study of the Canadian Farm Industry; the financial returns in Canadian Agriculture; a study of Agricultural Development and Policies affecting development. The relation between Agriculture and Canadian Industries. Attention will be given to an analysis of the economic development of Atlantic provinces Agriculture.

2nd year, 2nd term—3 lecs. per week.

Text to be assigned.

ENGINEERING

200: Engineering—Graphics

A course to develop skills in free hand and instrument drawing in orthographic projection, in perspective and mapping. Also descriptive geometry including rectangular projection on two and three planes, elements of axiometric central and topographic projections.

2nd year, both terms—1 lec. and 3 labs. per week.

Text: French & Vierck GRAPHIC SCIENCE

201: Engineering—statics

This course deals with a study of forces, force components, moments, couples and the resultant and equilibrium of a force system in two and three dimensions, as well as shear and bending moments in a beam. Centroids of lines, areas and volumes as well as the associated moments of inertia are determined. Analytical and graphical solution methods are used and an introduction to vectorial methods is included.

2nd year, both terms—2 lecs. and 1 lab per week.

Text: Beer and Johnson MECHANICS FOR ENGINEERS (STATICS)

210: Engineering—Farm Buildings

Introduction to basic farm structural design and specifications, layouts and plans, environmental conditions and

functional requirements of structures for product storage and livestock. Including construction methods and material standards.

2nd year, 1st term—2 lecs per week.

Reference text: FARM BUILDING STANDARDS.

211: Engineering—Farm Machinery

A course covering an introduction to the elements of machinery and their application to farm machines, a study of the operation of both 2 and 4 cycle gasoline and diesel engines including repair and adjustment. Welding techniques are illustrated and productivity and cost analysis are studied and applied to problems in machinery selection and management.

2nd year, 1st term—1 lec. and 2 labs. per week.

No specific text.

220: Engineering—Surveying

This course covers the use and adjustment of surveying instruments. Measurements of distance, differential and profile levelling, exercise in transit traverses and running simple curves.

2nd year, 2nd term—2 lecs. and 2 labs. per week.

(may require up to a week after exams in field exercises depending on weather during the term.)

Text: To be announced.

300: Engineering—Strength of Materials (Prerequisite—Engineering 201)

The course includes a preliminary introduction to engineering materials and their properties and quality standards. The main course of study includes an analytic treatment of stress-strain relationships for tension, compression, shear and combined stresses, shear bending moment, slope and deflection and stresses in beams, torsion in shafts, statically indeterminate beams, columns.

3rd year, both terms—2 lecs. and 1 lab. per week.

Text: To be announced.

301: Engineering—Dynamics (Prerequisite—Engineering 201)

A study of the principles of engineering dynamics as related to the kinematics and kinetics of particles and rigid

bodies in rectilinear and curvilinear motion. Work and energy and impulse and momentum methods are introduced. Analytical, graphical and vectorial methods are used.

3rd year, both terms—2 lecs. and 1 lab. per week.

Text: Beer & Johnson MECHANICS FOR ENGINEERS + DYNAMICS

310: Engineering—Fluid Mechanics (Prerequisite—Mathematics 200)

A study of physical properties of liquids and gases, fluid statics and fluid flow. Typical problems will be solved analytically during the laboratory periods.

3rd year, 1st term—2 lecs. and 1 lab. per week.

Text: To be announced.

320: Engineering—Thermodynamics (Prerequisite—Mathematics 200—Physics 200)

A study of the conservation of energy and mass in flow and non-flow systems and processes, application of the first and second laws in cycles using ideal gases and vapours. Including the properties of liquids and vapours, processes and cycles for powered units.

3rd year, 2nd term—2 lecs. and 1 lab. per week.

Text: To be announced.

ENGLISH

100: Survey of English Literature from Anglo-Saxon to 20th Century.

Selected readings in Poetry and Prose; 1 play by Shakespeare. Composition and speech; theme writing and public speaking.

1st year, both terms—4 lecs. per week.

Text: Clark, Hudson and Pace (Brett-Macmillan), ENGLISH LITERATURE.

HISTORY

100: Canadian History

Emphasis on constitutional and economic aspects.

1st year, both terms—3 lecs. per week.

Text: Lower, COLONY TO NATION.

220: History of Agriculture

A study of the development of agriculture from its earliest beginnings to the present day, with special emphasis on the effects these developments have had on the history of mankind.

2nd year, 2nd term—2 lecs. per week.

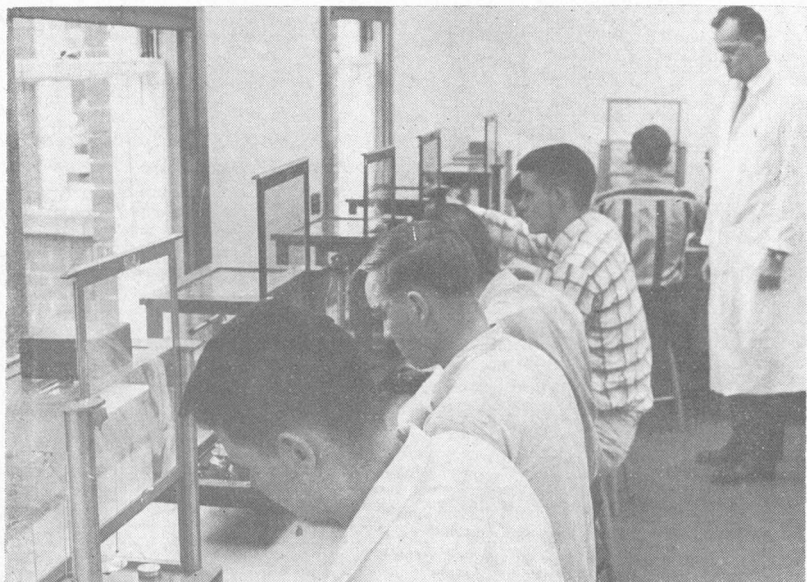
MATHEMATICS

100: Algebra and Trigonometry

Systems of real numbers, including absolute values, inequalities, exponents and rational exponents; functions—cartesian coordinates, graphs of functions and equations, variation; exponential and logarithmic functions—their graphs equations and computation; trigonometric functions, formulas and identities; complex numbers; theory of equations, factoring polynomials, remainder and factor theorems, finding zeroes; systems of equations, including matrices; permutations, combinations, binomial theorem; sequences; and mathematical induction.

1st year, both terms—3 lecs. per week.

Text: Fisher and Ziebur, INTEGRATED ALGEBRA AND TRIGONOMETRY (Second Edition)



200: Calculus and Analytic Geometry (Prerequisite—
Mathematics 100.)

The straight line, the ellipse, the parabola and the hyperbola; a study of limit and the derivative with applications to maxima and minima, velocity and acceleration; differentiation of the trigonometric, exponential and logarithmic function in detail; curvature; the mean value theorem; integration techniques; and the definite integral with applications to areas, volumes, length of arc, hydrostatic pressure, work, moments and centroid.

2nd year, both terms—3 lecs. per week.

Text: Protter and Morrey, CALCULUS WITH ANALYTIC GEOMETRY.

300: Advanced Calculus for engineering students
(Prerequisite—Mathematics 200)

Partial differentiation, line and multiple integrals, Taylor's series and Fourier's series, ordinary differential equations. These topics, particularly differential equations, will be considered at greater depth than in Mathematics 320.

3rd year, both terms—3 lecs. per week.

Text to be announced.

310: Elementary Statistics (Prerequisite—Mathematics 100)

Measures of central tendency and variability; normal frequency curve; tests of significance of differences between means; non-parametric methods; regression and correlation; binomial; Poisson and Chi-square distributions, sampling, simple analysis of variance.

3rd year, 1st term—3 lecs. per week.

320: Advanced Calculus (Prerequisite—Mathematics 200.)

Partial differentiation, line and multiple integrals, Taylor's series and Fourier series, ordinary differential equations.

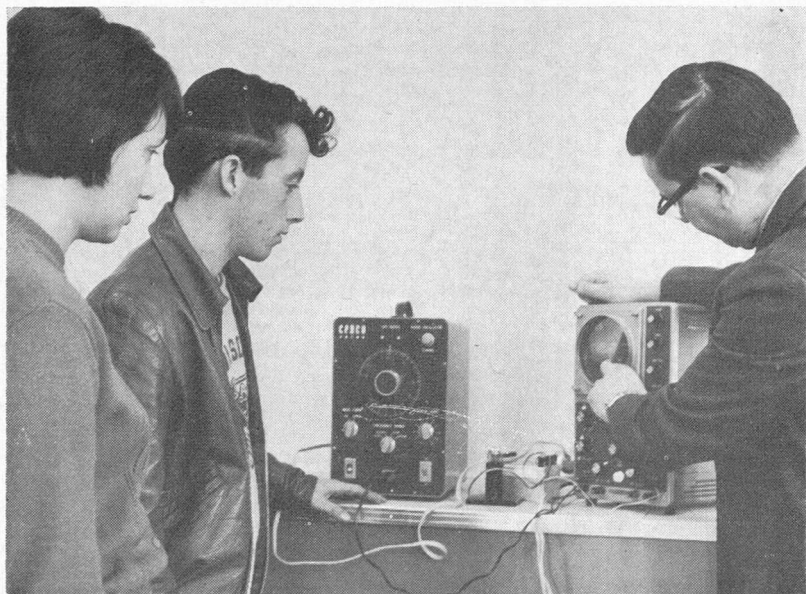
3rd year, 2nd term—3 lecs. per week.

PHYSICAL EDUCATION

That phase of education concerned with the teaching of skills and attitudes in play activities. A program providing each student with an opportunity to develop skill and understanding in a variety of sport activities, that will serve him throughout life, and with unique opportunities in developing

desirable character and social traits as well as defined responsibilities toward the physical development of the individual. The development of these traits, plus the objectives of increased strength and endurance, better motor skills, and improved health practices are the desirable outcomes of the physical education program.

First year, both terms—2 lecs. per week.



PHYSICS

100: Introductory Physics

An introductory course covering mechanics, heat, light, sound, electricity and magnetism. Development of the basic theories of physics with practical applications in solving numerical examples. Emphasis on the experimental foundations of physics in laboratory exercises designed to give students an appreciation of the scientific method and to permit them to demonstrate and study physics phenomena for themselves. Selected topics in atomic and nuclear physics.

1st year, both terms—3 lecs. and 4 labs. per week.

Text: Smith & Cooper, ELEMENTS OF PHYSICS.

200: Intermediate Physics (Prerequisites—Physics 100, Mathematics 100, and registration in Mathematics 200)

Study in greater detail of the topics taken up in the first year. Use in some topics of the basic concepts of the calculus. Considerable emphasis on magnetic and electrical phenomena and AC and DC circuit analysis.

2nd year, both terms—3 lecs. and 4 labs. per week.

Text: Sears and Zemansky; UNIVERSITY PHYSICS (3rd edition)

300: Electricity and Magnetism (Prerequisites—Physics 200 and Mathematics 200)

A course for students who have studied general physics and have taken one year of calculus.

The course will cover the physics and mathematics of electric forces and fields, electric potential, capacitance and dielectric theory, direct current circuit analysis, resistance and potential measurements, magnetic fields and electromagnetic induction, alternating currents and analysis of circuits carrying sinusoidal currents. The influence of electric and magnetic fields on ions will also be treated, as well as an introduction to electronics.

This course is primarily for engineers, but may be elected by others interested, upon approval.

3rd year, both terms—2 lecs. and 2 labs. per week.

Textbook to be announced.

PLANT SCIENCE

300: Introduction to Plant Science

General principles underlying the improvement, culture and utilization of horticultural and field crop plants. Special attention will be given to the use of plants as the basic food resource of man.

3rd year, 1st term—2 lecs. and 2 labs. per week.

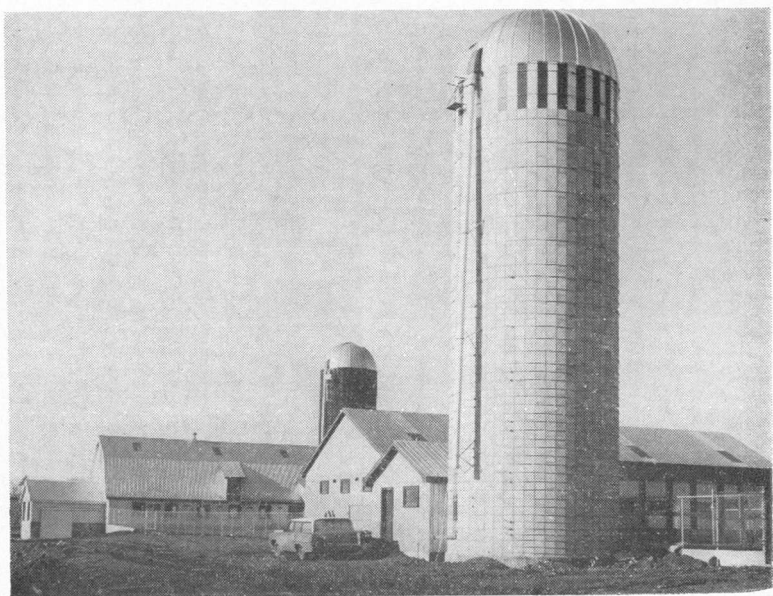
SOIL SCIENCE

310: Introduction to Soil Science

An introductory course dealing with the general principles of soil science, including origin, development and classification,

chemical and physical properties related to crop production and soil conservation and land use.

3rd year, 1st term—3 lecs. and 2 labs. per week.



TECHNICAL COURSES

To satisfy the needs of the farm and farm-related businesses and services, the Nova Scotia Agricultural College offers a broad program of studies leading to Technician Diplomas and Diplomas of Technology.

I. TECHNICIAN COURSES

Entrance Requirements

All candidates for admission must:

(a) be eighteen years of age, on or before the opening day of the College year;

(b) present a satisfactory medical certificate dated no more than thirty days previous to registration; and

(c) present evidence of a provincial or high school pass in English, Mathematics, one science, and two other subjects at the Nova Scotia Grade XI, New Brunswick Grade XII, Prince Edward Island Grade XII or Newfoundland Grade XI levels.

Candidates from both the academic and general courses are considered for admission. Applicants should understand that possession of the minimum entrance requirements will not guarantee admission.

Students who complete all the course requirements with no mark below fifty per cent of the maximum mark obtainable and who are in good standing will be awarded a Technician Diploma and thus become "Associates of the Nova Scotia Agricultural College with all the rights and privileges pertaining thereto."

Refresher Course

Candidates whose preparation is not considered adequate may be required to enrol for a refresher course in one or more subjects which will be offered from September 3 to September 17. The additional cost will be for board and lodging only.



SUPPLEMENTAL EXAMINATIONS

A student in a Technician Course may write supplemental examinations in a maximum of three subjects if his combined average for all subjects is above 50% and the mark in the failed subject(s) is above 30%.

He may not register for the second academic year if he, after writing supplementals, has failed to receive a pass mark in more than two subjects.

A maximum of two supplementals will be permitted in each failed subject.

The fee for a first supplemental examination in any subject will be \$5.00 and for a second \$10.00.

Financial Assistance

A living allowance of \$15.00 per week will be provided for Prince Edward Island students in good standing from Federal-Provincial funds if an application is made to the Director of Vocational Education, Department of Education, Charlotte-

town, by September 15th. Each student, although receiving this assistance periodically, is still expected to pay to the College the full board payments for each date specified.

A. **Agricultural Business**

The Nova Scotia Agricultural College offers a two year course in Agricultural Business to help students prepare themselves for careers on the farm as business managers, or as managers and supervisors in farm related business firms. The course is composed of both on-campus instruction and in-service training.

AGRICULTURAL BUSINESS SYLLABUS

FIRST ACADEMIC YEAR

		First Term		Second Term	
		Lec.	Lab.	Lec.	Lab.
E 11 (a)	Orientation.....	1			
E 10	English.....	3		3	
M 10	Applicable Mathematics.....	3		3	
C 11	Soils (Physics and Chemistry)	2	2	2	2
C 10	Basic Chemistry.....	2	2	2	2
B 10	Biology.....	2	4	2	4
AE 10	Agricultural Engineering.....	2	2	2	2
AB 10	Accounting and Financial Records.....	2	1	3	
AB 11 (b)	Principles of Marketing.....			1	2
	Physical Education.....	2		2	
AB 12 (b)	Work Simplification—one week				

FIRST PERIOD OF IN-SERVICE-TRAINING

At least three months of in-service training prior to the commencement of the second academic year will be arranged by the College for each student, who will be placed as a trainee on a farm or in a farm related business of a type corresponding to his interests. He will earn a salary during the in-service training.

SECOND ACADEMIC YEAR

		First Term		Second Term	
		Lec.	Lab.	Lec.	Lab.
E 20	Human Relations.....	2	2	2	2
AB 20	Business Management.....	2	4	2	2
AB 21 (a)	Applied Marketing	one day/week			
AB 22 (b)	Agricultural Policy.....			3	
AB 23 (b)	Civics and Law.....			2	2
AE 20	Agricultural Engineering.....	2	2	2	2
PS 20	Field Crops Production.....	2	2	2	2
	One of the following:				
AS 20 (a)	Livestock Production.....	2	4		
PS 21 (a)	Vegetable Production	2	4		
	One of the following:				
AS 20 (b)	Animal Nutrition.....			2	4
PS 21 (b)	Fruit Production.....			2	4
	Projects				

SECOND PERIOD OF IN-SERVICE TRAINING

At least three months of in-service training after the completion of the second academic year will be arranged by the College for each student, who will be placed as a trainee on a farm or in a farm related business of a type corresponding to his interests. He will earn a salary during the in-service training period.

B. Animal Science

The Nova Scotia Agricultural College offers a two year course in Animal Science to help students prepare themselves for careers on farms as animal specialists or as animal science technicians in farm related services and industries. The course is composed of both on campus instruction and in-service training.

**ANIMAL SCIENCE SYLLABUS
FIRST ACADEMIC YEAR**

		First Term		Second Term	
		Lec.	Lab.	Lec.	Lab.
E 11 (a)	Orientation.....	1			
E 10	English.....	3		3	
M 10	Appliable Mathematics.....	3		3	
C 11	Soils (Physics and Chemistry)	2	2	2	2
C 10	Basic Chemistry.....	2	2	2	2
B 10	Biology.....	2	4	2	4
AE 10	Agricultural Engineering.....	2	2	2	2
AB 11 (a)	Economics.....	3			
AB 11 (b)	Principles of Marketing.....			1	2
AS 10 (b)	Breeds and Breed History.....			2	2
	Physical Education.....	2		2	
AB 12 (b)	Work Simplification—one week				

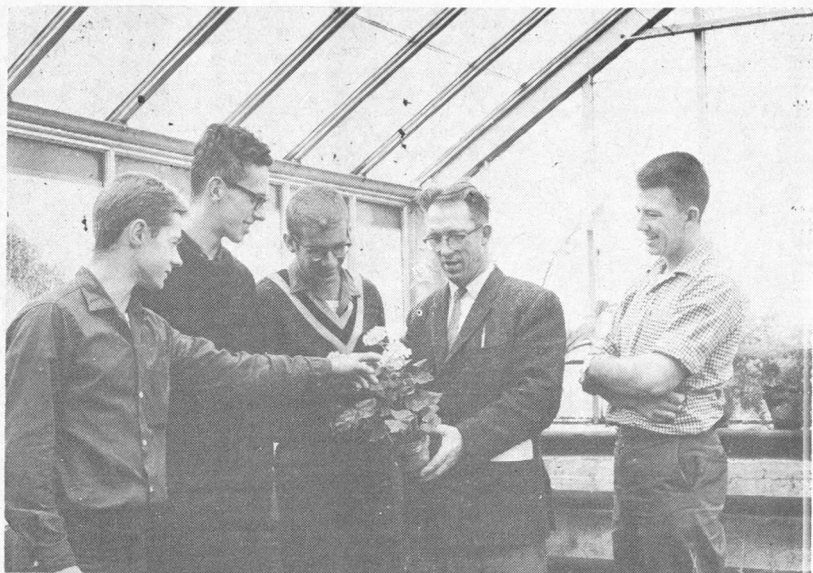
FIRST PERIOD OF IN-SERVICE TRAINING

At least three months of in-service training prior to the commencement of the second academic year will be arranged by the College for each student, who will be placed as a trainee on a farm or in a farm related business of a type corresponding to his interests. He will earn a salary during the in-service training period.

SECOND ACADEMIC YEAR

		First Term		Second Term	
		Lec.	Lab.	Lec.	Lab.
E 20	Human Relations.....	2	2	2	2
PS 20	Field Crops Production.....	2	2	2	2
AS 21	Processing.....	3		3	
AE 20	Agricultural Engineering.....	2	2	2	2
AS 20 (a)	Livestock Production.....	2	4		
AS 22 (a)	Advanced Livestock Production	3			
AS 23 (a)	Animal Physiology.....	3			
AS 23 (b)	Animal Pathology.....			3	
AS 24 (b)	Animal Breeding.....			2	
AS 20 (b)	Animal Nutrition.....			2	4
	Projects.....				
C 20	Chemistry*.....	2	4	2	4
M 20	Physics*.....	2	4	2	4

*Students who wish to qualify for admission to a third year leading to a diploma as a Biology or Chemistry Laboratory Technologist must elect Chemistry and Physics instead of Agricultural Engineering and Advanced Livestock Production.



SECOND PERIOD OF IN-SERVICE TRAINING

At least three months of in-service training after the completion of the second academic year will be arranged by the College for each student, who will be placed as a trainee on a farm or in a farm related business of a type corresponding to his interests. He will earn a salary during the in-service training period.

C. Plant Science

The Nova Scotia Agricultural College offers a two year course in Plant Science to help students prepare themselves for careers on farms as plant specialists or as plant science technicians in farm related services and industries. The course is composed of both on-campus instruction and in-service training.

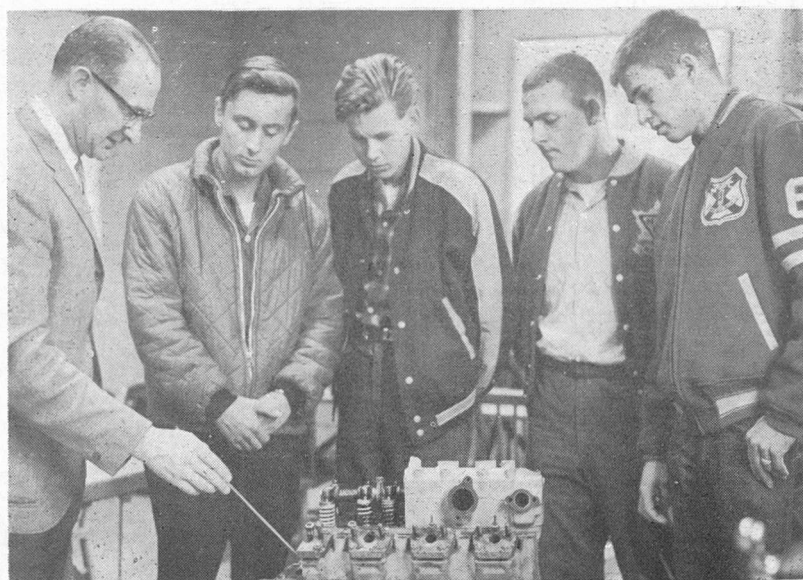
PLANT SCIENCE SYLLABUS

FIRST ACADEMIC YEAR

		First Term		Second Term	
		Lec.	Lab.	Lec.	Lab.
E 11 (a)	Orientation.....	1			
E 10	English.....	3		3	
M 10	Applicable Mathematics.....	3		3	
C 11	Soils (Physics and Chemistry)	2	2	2	2
C 10	Basic Chemistry.....	2	2	2	2
B 10	Biology.....	2	4	2	4
AE 10	Agricultural Engineering.....	2	2	2	2
AB 11 (a)	Economics.....	3			
AB 11 (b)	Principles of Marketing.....			1	2
B 11 (b)	Entomology.....			3	
	Physical Education.....	2		2	
AB 12 (b)	Work Simplification—one week				

FIRST PERIOD OF IN-SERVICE TRAINING

At least three months of in-service training prior to the commencement of the second academic year will be arranged by the College for each student, who will be placed as a trainee on a farm or in a farm related business of a type corresponding to his interests. He will earn a salary during the in-service training period.



SECOND ACADEMIC YEAR

		First Term		Second Term	
		Lec.	Lab.	Lec.	Lab.
E 20	Human Relations*.....	2	2	2	2
B 20	Botany*.....	2	2	2	2
PS 22	Plant Propagation*.....	1	2	1	2
B 21	Plant Pathology*.....	2		2	
AE 20	Agricultural Engineering*.....	2	2	2	2
	Projects*.....				
PS 23	Landscaping**.....	1	2	1	2
PS 24	Greenhouse Crops Production**.....	1	2	1	2
AB 24 (b)	Credit Management**.....			2	2
AE 21 (b)	Electrical Controls**.....			2	2
PS 21 (a)	Vegetable Production**.....	2	4		
PS 21 (b)	Fruit Production**.....			2	4
	Field Crops Production**.....	2	2	2	2
C 20	Chemistry***.....	2	4	2	4
M 20	Physics***.....	2	4	2	4

* Required subjects.

** Subjects involving a minimum of eight additional lecture hours per week per year to be selected from this group in consultation with the instructor in the principal field of interest and the Dean of Vocational and Technical Training.

*** Candidates who wish to qualify for admission to a third year leading to a diploma as a Biology or Chemistry Laboratory Technologist will elect Chemistry instead of Agricultural Engineering and Physics instead of elective courses with an equivalent number of lecture hours.

SECOND PERIOD OF IN-SERVICE TRAINING

At least three months of in-service training after the completion of the second academic year will be arranged by the College for each student, who will be placed as a trainee on a farm or in a farm related business of a type corresponding to his interests. He will earn a salary during the in-service training period.

**AGRICULTURAL ENGINEERING
FIRST ACADEMIC YEAR**

		First Term		Second Term	
		Lec.	Lab.	Lec.	Lab.
E 11 (a)	Orientation.....	1			
E 10	English.....	3		3	
M 10	Applicable Mathematics.....	3		3	
C 11 (a)	Soils.....	2	2		
AE11 (b)	Water and Soil Conservation			2	2
AB11 (a)	Economics.....	3			
AB11 (b)	Principles of Marketing.....			1	2
M 11	Physics.....	1	2	1	2
AE 11	Mechanics of Materials.....	1	2	1	2
AE12	Drafting.....		2		2
PS 20	Field Crops Production.....	2	2	2	2
AE 13	Agricultural Mechanics.....	2	4	2	4
	Physical Education.....	2		2	

FIRST PERIOD OF IN-SERVICE TRAINING

At least three months of in-service training prior to the commencement of the second academic year will be arranged by the College for each student, who will be placed as a trainee in work that corresponds to his interests. He will earn a salary during the in-service training.

SECOND ACADEMIC YEAR

		First Term		Second Term	
		Lec.	Lab.	Lec.	Lab.
E 20	Human Relations.....	2	2	2	2
AE 22	Farm Structures.....	2	4	2	4
AE 23	Farm Power Units.....	2	4	2	4
AE 24	Farm Machines.....	2	4	2	4
AE 25 (a)	Machine Hydraulics.....	2	2		
AE 21 (b)	Electrical Controls.....			2	2
AS 20 (a)	Livestock Production.....	2	4		
	Projects.....				

SECOND PERIOD OF IN-SERVICE TRAINING

At least three months of in-service training after the completion of the second academic year will be arranged by the College for each student, who will be placed as a trainee in work that corresponds to his interest. He will earn a salary during the in-service training.

DESCRIPTION OF COURSES

The following descriptions of all subjects in the four courses leading to Technician Diplomas are arranged in order of subject groups. The Faculty reserves the right to make any

revisions or additions which may be necessary. The duration of lecture and laboratory periods is 45 minutes.

AB 10: Accounting and Financial Records

Basic accounting procedures are stressed. Actual project work with farm and farm related business records helps the student to better understand inventories, assets, liabilities, owner's equity, changes in owner's equity, working capital, record book organization, preparing monthly statements, and closing the books. Accounting techniques for several forms of business organizations are examined. Some time is devoted to banking procedures and payroll bookkeeping.

The interpreting of financial records for income tax and Canada Pension plan purposes is covered. By making comparisons of actual balance sheets, the financial structure, variations in current position, and several trends are identified. The importance of records for management decisions is stressed.

Agr. Bus., 1st year, 1st term—2 lecs. and 1 lab. per week
2nd term—3 lab. per week.

AB 11 (a): Economics

The development of the Canadian Agricultural Industry is studied with special emphasis on the structure of agriculture within the Atlantic economy. The decision making process by various types of business units is analysed with particular emphasis on the wise use of inputs.

Ag. Eng., An. Sc., Pl. Sc., 1st year, 1st term—3 lecs. per week.

AB 11 (b): Principles of Marketing

The importance and costs of each function comprising the entire marketing process are examined. Distribution systems for several agricultural commodities are discussed. The course also includes a study of pricing and price stability in various types of market structures, as well as an examination of several types of selling contracts.

Ag. Eng., An. Sc., Pl. Sc., Agr. Bus., 1st year, 2nd term—1 lec. and 2 labs. per week.

AB 12 (b): Work Simplification

This is a practical course in the organized use of common sense to find an easier and better way to do a job and avoid waste of time, money, materials, equipment and other important factors.

Agr. Bus., An. Sc., Pl. Sc., 1st year, 1 week—time to be arranged.

AB 20: Business Management

The principles and methods of analyzing and organizing farm and farm related businesses are examined. Practical problems associated with size of business, balance in organization, labor efficiency, and production systems are assigned to the students. Some time is spent in budgeting and production planning.

Various sources of capital and the techniques of managing each category of credit are studied. The effect of capital limitations on business organization also is examined.

Agr. Bus., 2nd year, 1st term—2 lecs. and 4 labs. per week
2nd term—2 lecs. and 2 labs. per week.

AB 21 (a): Applied Marketing

Students visit a series of marketing organizations to learn the nature and extent of their operation, and the involvement of the organization in other segments of the agricultural industry. Causes of waste, spoilage, and low quality, and how costs of marketing are established are determined in several of the visits. Managers of the marketing organizations visited assist in the instruction.

Agr. Bus., 2nd year, 1st term—1 day per week.

AB 22 (b): Agricultural Policy

This is a study of the influence of government on Agriculture, including the effects of both agricultural and non-agricultural policies. Some of the current adjustments in Atlantic agriculture will be identified.

Agr. Bus., 2nd year, 2nd term—3 lecs. per week.

AB 23 (b): Civics and Law

Responsibilities of local, provincial, and federal levels of governments and government agencies are examined. Several legal considerations in the transfer of property and in the formation of partnerships and companies are also studied.

Agr. Bus., 2nd year, 2nd term—2 lecs. and 2 labs. per week.

AB 24 (b): Credit Management

Various sources of capital and the techniques of managing each category of credit are studied. The effect of capital limitations on business organization is examined.

Pl. Sc., 2nd year, 2nd term—2 lecs. and 2 labs. per week.

AE 10: Agricultural Engineering

Lectures include a comprehensive study of farm structures with special emphasis on layouts, building materials, environmental control, mechanization and design theory. The course also includes a practical introduction to electricity as it applies to the farm. Concepts of energy, voltage, current, resistance, power factor. Also introduction to electricity as it is used to produce light and heat.

Laboratory periods include practical instruction in the use of drawing instruments, lettering, orthographic projection, oblique and isometric drawings, sections, reading blueprints and compiling of bills of material; also a shopwork course covering fitting and the use of handtools, hot and cold metal work and welding.

Agr. Bus., An. Sc., Pl. Sc., 1st year, both terms—2 lecs. and 2 labs. per week.

AE 11: Mechanics of Materials

The characteristics and uses of the various building materials are studied. The design and analysis of simple trusses, beams and columns are examined.

Ag. Eng., 1st year, both terms—1 lec. and 2 labs. per week.

AE 11 (b): Water and Soil Conservation

In this course considerable emphasis is placed on the principles of land drainage, irrigation systems, and water storage structures as erosion control measures. Laboratory periods include practice in using surveying instruments, irrigation equipment and solving associated problems.

Ag. Eng., 1st year, 2nd term—2 lecs. and 2 labs. per week.

AE 12: Drafting

An introduction is given to drafting: lettering, the use of drawing instruments, drafting machines, etc. Orthographic projection, oblique drawings, isometric drawings, developments, sections and free hand sketching are covered. Practical applications include drawing up a bill of materials, development of prints, map readings, etc.

Ag. Eng., 1st year, both terms—2 labs. per week.

AE 13: Agricultural Mechanics

An introduction is given to the various machine elements. The selection, maintenance and operation of work shop tools, including power grinders, electric drills, metal cutting band saws, and acetylene and electric welders. Techniques in the fitting of hand tools and the heat treatment of metals.

Ag. Eng., 1st year, both terms—2 lecs. and 4 labs. per week.

AE 20: Agricultural Engineering

Lectures and laboratory periods cover the theory and practice in the operation of farm machinery. Adjustment, maintenance and repairs of moldboard plows, harrows, seeding machinery, weed sprayers, manure spreaders, mowing machines, forage harvesters, hay balers, elevators and hay drying equipment.

Theory of operation, preventative maintenance and servicing of gasoline and diesel farm power units, including their hydraulic systems, and electric motors as a source of power.

Agr. Bus., An. Sc., Pl. Sc., 2nd year, both terms—2 lecs. and 2 labs. per week.

AE 21 (b): Electrical Controls

This is a study of mechanical switches, limit switches, mercury switches, remote control switches, photoelectric switches, thermostats and humidity controls.

Ag. Eng., Pl. Sc., 2nd year, 2nd term—2 lecs. and 2 labs per week.

AE 22: Farm Structures

The design of livestock and service buildings, farmstead layouts, building layouts, beam and truss selection, environmental control to include heating and ventilation requirements, lighting requirements and materials handling systems are studied. Emphasis is placed on the solution of practical problems.

Ag. Eng., 2nd year, both terms—2 lecs. and 4 labs. per week.

AE 23: Farm Power Units

History and development of heat engines. The adjustments, maintenance and major repairs of farm diesel and gasoline tractor engines. Principle of construction, operation

and servicing of the various types of tractor clutches, transmissions and differentials. The study and testing of various types of A.C. electric motors as farm power units.

Ag. Eng., 2nd year, both terms—2 lecs. and 4 labs. per week.

AE 24: Farm Machinery

Assembly, adjustment, operation and calibration of mold-board plows, harrows, seeding machinery, fertilizer application equipment, weed and insect control machinery, manure spreaders, mowing machines, combines, forage harvesters, hay balers, crimpers, hay binds, crop blowers, elevators and hay drying equipment.

Ag. Eng., 2nd year, both terms—2 lecs. and 4 labs. per week.

AE 25 (a): Machine Hydraulics

The basic theory of operation of hydraulic pumps, control valves, cylinders, motors, water systems and pumps. Performing tests with above equipment and interpreting results. Emphasis is placed on operating characteristics of hydraulic equipment and selecting equipment for agricultural use.

Ag. Eng., 2nd year, 1st term—2 lecs. and 2 labs. per week.

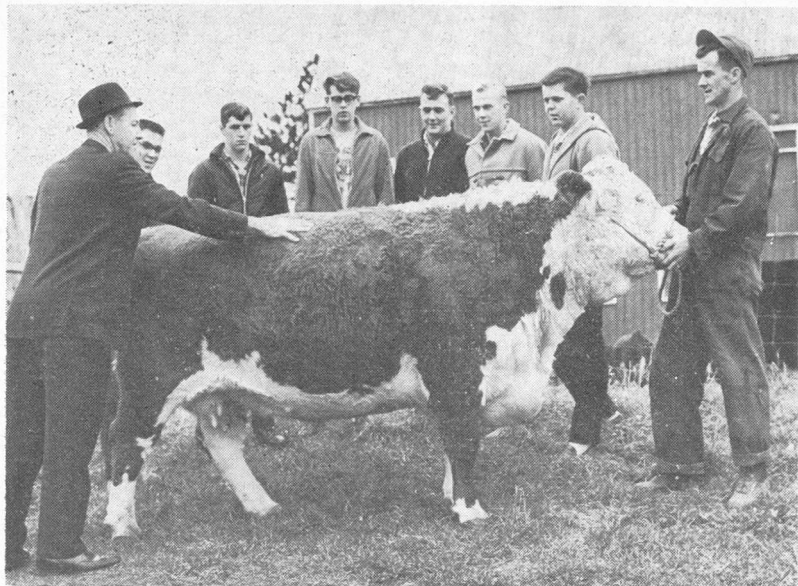
AS 10 (b): Breeds and Breed History

The characteristics, history, policies and programs of the various breeds of farm animals are studied. Other topics include identification and registration, pedigrees, judging, grading, classifying and scoring of breeding stock, market animal evaluation, and correlation of type and yield.

An. Sc., 1st year, 2nd term—2 lecs. and 2 labs. per week.

AS 20 (a): Livestock Production

A general survey of the dairy, red meat and poultry industries is made. Topics covered in the lectures include the genetic derivation of domestic farm animals, the characteristics and development of the various breeds of farm animals, the policies and programs of the breed associations, the identification and registration of farm animals and the preparation of pedigrees. Topics covered in the laboratory periods include judging, grading, classifying and scoring of breeding stock, market animal evaluation and correlation of type and yield.



Ag. Eng., Agr. Bus., An. Sc., 2nd year, 1st term—2 lecs. and 4 labs. per week.

AS 20 (b): Animal Nutrition

This is a study of the various commonly used feedstuffs with respect to their nutrient content and feeding value. The nutrient requirements of farm livestock and the balancing of rations to meet growth, production and reproduction needs are covered. A comparative study of ruminant and monogastric digestion is made.

Agr. Bus., An. Sc., 2nd year, 2nd term—2 lecs. and 4 labs. per week.

AS 21: Processing

This is a study of government regulations as they apply to the production of livestock and poultry products at the producer, the processor and retailer levels. Also included will be discussions on the composition of and manufacturing of each product, quality control and flavor problems.

An. Sc., 2nd year, both terms—3 lecs. per week.

AS 22 (a): Advanced Livestock Production

This is an advanced study in livestock production with special reference to the problems in the industry: breeding, selection, housing, feeding and marketing. Practical work with animals and poultry in feeding, selection and general management is included.

An. Sc., 2nd year, 1st term—3 lecs. per week.

AS 23 (a): Animal Physiology

This course considers the fluids of the body, circulation, respiration, digestions, absorption, excretion, energy exchange, muscular activity, neurology, endocrinology and the reproduction of domestic animals.

An. Sc., 2nd year, 2nd term—3 lecs. per week.

AS 23 (b): Animal Pathology

Systems of sanitation and hygiene promoting good health are discussed. The causes, symptoms, prevention and control of common animal diseases and ailments are outlined.

An. Sc., 1st year, 2nd term—3 lecs. per week.

AS 24 (b): Animal Breeding

In this course the theoretical and practical application of inheritance in the breeding and selecting of animals is studied.

An. Sc., 2nd year, 2nd term—2 lecs. per week.

B 10: Biology

This is a study of the biological principles that are most important in agriculture. The structure, growth and reproduction of both plants and animals are discussed, with an introduction to the study of genetics. The role of organic cycles, the relationship of plants and animals to their environment, the regulation of growth and development, and nutrition are included.

Agr. Bus., An. Sc., Pl. Sc., 1st year, both terms—2 lecs. and 4 labs. per week.

B 11 (b): Entomology

This course deals with the economic aspects of insects and other animal type pests, with special reference to the Atlantic

provinces. Structure, growth, reproduction, distribution and other factors involving control are considered.

Pl. Sc., 1st year, 2nd term—3 lecs. per week.

B 20: Botany

Plant Identification: A course covering the classification and naming of plants with special attention given to plants of economic importance. These include the common weeds, trees and shrubs, and cultivated plants. The important plant families will be considered, along with laboratory work in identification.

Plant Physiology: More advanced study of the structure of plants and how they live, grow and reproduce. The various plant processes such as photosynthesis, respiration, absorption, nutrition, transpiration and growth are included, along with a study of the various factors that influence the growth and economic production of crops.

Pl. Sc., 2nd year, both terms—2 lecs. and 2 labs. per week.

B 21: Plant Pathology

The different types of diseases due to viruses, bacteria, fungi and environmental causes are discussed and a study is made of the organisms concerned. This is followed by an outline of the more important diseases of our ornamentals and field and vegetable crops. The methods of control, including the use of fungicides, are considered; and some attention is given to the machinery used for the application of fungicides.

Pl. Sc., 2nd year, both terms—2 lecs. per week.

C 10: Basic Chemistry

A study of elements, compounds, atomic structure, bonding, and why reactions occur is followed by a study of some specific reactions such as oxidation and reduction, neutralization and ionization. The basic chemical properties of some organic compounds will be examined and related to agricultural chemicals.

Agr. Bus., An. Sc., Pl. Sc., 1st year, both terms—2 lecs. and 2 labs. per week.

C 11: Soils (Physics and Chemistry)

The physical properties of soils are examined with special emphasis on soil profiles, soil textures, particle size, soil mois-

ture, water retention, compaction, soil air, soil temperature, drainage, erosion, and tillage. Several types of Atlantic Provinces soil are examined.

The chemical properties of soil particles and solutions are studied as well as principal chemical reactions in soils. The function of soil as a medium to support plant life, fertilizing, liming, pH and plant nutrients are stressed. The selection, use, and effects of various chemical additives to the soil are discussed.

Agr. Bus., An. Sc., Pl. Sc., 1st year, both terms—2 lecs. and 2 labs. per week.

Ag. Eng., 1st year, 1st term—2 lecs. and 2 labs. per week.

C 20: Chemistry

The general principles and theories of Organic Chemistry, the nomenclature of organic compounds, the chemistry of functional groups of various basic classes of organic compounds, the importance of Organic Chemistry in relation to plant and animal life, and basic Biochemistry, including the study of enzymes, vitamins, carbohydrates, lipids, and proteins are studied.



The modern organic and biochemical methods of extraction, purification and identification are studied, using modern laboratory procedures. Spectrophotometric, microscopic, titrimetric analyses methods are used. Laboratory procedure is correlated with lecture material and agricultural materials are emphasized.

An. Sc., Pl. Sc., 2nd year, both terms—2 lecs. and 4 labs. per week.

Text and laboratory manual to be selected.

E 10: English

This course is designed to assist the student with his reading comprehension, oral expression and written communication.

Students are given an intensive course in public speaking designed to develop confidence on the speaking platform. The course progresses from three-minute talks with notes to longer talks with only the use of information cards.

Weekly essays are assigned to develop writing skills. Reading exercises are undertaken both in and outside the class to develop speed and comprehension in reading. Outside reading also includes the works of accepted masters of the English language. Weekly exercises in vocabulary development are also conducted.

Ag. Eng., Agr. Bus., An. Sc., Pl. Sc., 1st year, both terms—3 lecs. per week.

Texts: Jorgensen and Shroyer, Editors A COLLEGE TREASURY; Emery and Kierzek, ENGLISH FUNDAMENTALS, FOURTH EDITION FORM C; Hardwick, WORDS ARE IMPORTANT, FIRST BOOK OF VOCABULARY IMPROVEMENT; Miller, INCREASING READING EFFICIENCY.

E 11 (a): Orientation

This is an introduction to the function of the college and life on campus, as well as an introduction to various types of farm and farm related business.

Ag. Eng., Agr. Bus., An. Sc., Pl. Sc., 1st year, 1st term—1 lec. per week.

E 20: Human Relations

This course will use the disciplines of Theology, Psychology and Sociology to give students an understanding of themselves, their society and the world in which they live and their responsibilities to all three. Some time will be spent in looking at group relationships. A major part of the course will be a comprehensive analysis of the students' home community.

Texts: Shinn, THE TANGLED WORLD; THE HOLY BIBLE Revised Standard Version; Tournier, THE MEANING OF PERSONS; Newbigin, HONEST RELIGION FOR SECULAR MAN; Griffin, BLACK LIKE ME; King Jr., WHY WE CAN'T WAIT; Harris, THE JUNKIE PRIEST and other assigned readings.

Ag. Eng., Agr. Bus., An. Sc., Pl. Sc., 2nd Year, both terms—2 lecs. and 2 labs per week.

M 10: Applicable Mathematics

The essentials of algebra, geometry and trigonometry are covered. Considerable emphasis is also placed on measurement systems, ratios, proportions, percentages, and financial considerations such as simple interest, compound interest, and consumer loans.

Ag. Eng., Agr. Bus., An. Sc., Pl. Sc., 1st year, both terms—3 lecs. per week.

M 11: Physics

A course designed to give students background in the basic physical principles employed in such applied fields as structures, machine design and operation, electric power applications and controls, etc.

Laboratory instruction is a part of the course, permitting the student to perform elementary experiments which demonstrate the principles he is studying, and to develop techniques of solving physical problems.

Ag. Eng., 1st year, both terms—1 lec. and 2 labs. per week.

M 20: Physics

This course emphasizes the fundamentals of light, electricity and magnetism, basic electronics, heat and atomic and nuclear physics, with only sufficient mechanics as are necessary for an understanding of these topics.

This course is to be elected only by those students who wish to proceed to a third year leading to a diploma as a Biology or Chemistry Laboratory Technologist.

An. Sc., Pl. Sc., 2nd year, both terms—2 lecs. and 4 labs. per week.

Physical Education

That phase of education concerned with the teaching of skills and attitudes in play activities. A program providing each student with an opportunity to develop skill and understanding in a variety of sport activities that will serve him throughout life, and with unique opportunities in developing desirable character and social traits as well as defined responsibilities toward the physical development of the individual. The development of these traits, plus the objectives of increased strength and endurance, better motor skills, and improved health practices are the desirable outcomes of the physical education program.

Ag. Eng., Agr. Bus., An. Sc., Pl. Sc., 1st year, both terms—2 lecs. per week.

Projects

This is an opportunity to examine in detail specific agricultural topics of interest to the students. Projects will be organized and carried out by the students under the supervision of various staff members.

Ag. Eng., Agr. Bus., An. Sc., Pl. Sc., 2nd year, both terms—time to be arranged.

PS 20: Field Crops Production

A study of grasses, legumes and other crops used in a forage program. Production, management, harvesting, storage and utilization practices suited to the various crops are studied. The development of forage programs is undertaken. The production, harvesting and storing of the common cereals are studied, along with their agronomic uses. Consideration is given to other Canadian crops not grown in the Atlantic region. The production of such specialized crops as potatoes and flue cured tobacco is discussed.

Agr. Bus., An. Sc., Pl. Sc., 2nd year, both terms—2 lecs. and 2 labs. per week.

Ag. Eng., 1st year, both terms—2 lecs and 2 labs. per week.

PS 21 (a): Vegetable Production

The increasing importance of vegetable production is recognized in this course. The source of our vegetables coming from a wide assortment of plants and from all parts of these plants, and types of vegetable production and storage are studied. Discussion of the culture of these crops makes frequent references to the practical application of theory studied in the science courses. The laboratory periods are used to show the preferred varieties and the reasons for their being in demand for retail sale or for processing.

Agr. Bus., Pl. Sc., 2nd year, 1st term—2 lecs. and 4 labs. per week.

PS 21 (b): Fruit Production

This course includes both small fruit culture and tree fruits. The practices involved in the production of strawberries, blueberries, raspberries, blackberries, currants, gooseberries and cranberries and the practices carried out in orchard operations are studied.

Agr. Bus., Pl. Sc., 2nd year, 2nd term—2 lecs. and 4 labs. per week.

PS 22: Plant Propagation

This course considers the production of plants by both seed and vegetative methods. It includes a detailed study of seed germination and the advantages and disadvantages of this type of reproduction as compared to vegetative reproduction including graftage, layerage, separation and division. A study of seeding and potting composts, rooting mediums and propagating structures and associated equipment is also made.

Pl. Sc., 2nd year, both terms—1 lec. and 2 labs. per week.

PS 23: Landscaping

This course deals with ornamental plant materials, their identification, culture and maintenance and their use in landscape planning. Subjects covered include trees, shrubs, lawns, bulbs, annual and perennial flowers.

Pl. Sc., 2nd year, both terms—1 lec. and 2 labs. per week.

PS 24: Greenhouse Crops Production

This course deals first with the types of houses in which crops are presently grown and the associated heating plants and controls. The general practices involved in successful operation such as heating, ventilation, watering, fertilizing, leaching, spraying, and sterilizing are studied. The culture of the individual greenhouse vegetable crops and the important florist crops is also covered in detail both in the classroom and the associated greenhouses.

Pl. Sc., 2nd year, both terms—1 lec. and 2 labs. per week.

II TECHNOLOGY COURSES

Entrance Requirements

A candidate for admission must:

- (a) be a graduate of a Technician or an equivalent course;
- (b) present a satisfactory medical certificate;
- (c) submit a program of study to the Technician Syllabus Committee; and
- (d) present himself for interviews when requested.

Each program of study must contain at least two full year subjects, projects, and considerable laboratory experience. The required subjects may include the following:

- (a) Advanced Livestock Production, AS 30,
- (b) Advanced Field Crop Production, PS 30,
- (c) Advanced Business Management, AB 30,
- (d) Selected second year subjects from Technician courses,
- (e) or new subjects for which there is sufficient demand.

“Program of Study” forms are available from the Registrar, Nova Scotia Agricultural College, Truro, Nova Scotia. Application forms accompanied by a completed program of study should be submitted before May 1 of the year in which study is to commence.

VOCATIONAL COURSES

The Nova Scotia Agricultural College offers pre-employment and upgrading courses for several specific farm and farm related careers. These may be of varying lengths and offered at different times of the year depending upon the occupation topic(s) being studied. All vocational courses lead to vocational certificates.

A. EXAMPLES OF PRE-EMPLOYMENT COURSES:

1. Dairy Herd Operation

Outline of Course Units	No. of Hours
1. The Dairy Cow.....	60
2. Milking Procedures.....	140
3. Dairy Herd Health.....	130
4. Selection Practices.....	30
5. Mechanics.....	150
6. Records.....	80
7. Feeds and Feeding.....	90
8. Care of Animals.....	130
9. Work Simplification.....	40
10. Human relations.....	50
TOTAL.....	900

2. Swine Herd Operation

Outline of Course Units	No. of Hours
1. Introduction to Swine Production	3
2. Feeding.....	50
3. Handling of Swine.....	50
4. Work Procedures.....	25
5. Swine Herd Health.....	47
6. Mechanics.....	25
7. Records.....	25
8. Human Relations.....	25
TOTAL.....	250

3. Poultry House Operation

Outline of Course Units	No. of Hours
1. The Structure and Functioning of a Bird.....	20
2. Environmental Control.....	30
3. Poultry Health.....	50
4. Sanitation Practices.....	25
5. Records.....	20
6. Mechanics.....	50
7. Brooding, Rearing and Laying.....	50
8. Work Simplification.....	25
9. Human Relations.....	30
TOTAL.....	300

4. Beef Herd Operation

Outline of Course Units	No. of Hours
1. The Beef Animal.....	20
2. Beef Herd Health.....	40
3. Feeds and Feeding.....	40
4. Care of Animals.....	40
5. Selection of Animals.....	40
6. Mechanics.....	40
7. Work Simplification.....	30
8. Records.....	30
9. Human Relations.....	30
TOTAL.....	300

5. Woodlot Harvesting

Outline of Course Unit	No. of Hours
1. Orientation of Woodlot Harvesting and related occupations.....	5
2. Safety practices, fire prevention and first aid.....	5
3. Conservation, woodlot management and aims of Forest Improvement Act	20
4. Operation of mechanical equipment	35
5. Maintenance of hand tools and mechanical equipment.....	15
6. Tree identification.....	5
7. Felling, limbing and chunking.....	60
8. Scaling.....	5
9. Loading and unloading.....	5
10. Pulpwood operation.....	60
11. Sawlog operations.....	60
12. Wise utilization of trees (includes Christmas Tree production).....	10
13. Human Relations.....	15
TOTAL.....	300

6. Artificial Insemination

Outline of Course Units	No. of Hours
1. Theoretical (Anatomy and Reproductive Physiology).....	35
2. Handling and Care of Semen.....	7
3. Record Keeping.....	34
4. Practical Training in Insemination	44
TOTAL.....	120

7. Florist Shop Operation

Outline of Course Units	No. of Hours
1. Types of floral arrangements.....	35
2. Design techniques.....	35
3. Sales techniques.....	14
4. Customer relations.....	20
5. Handling wire orders.....	6
6. Quality control.....	30
TOTAL.....	140

B. EXAMPLES OF UP-GRADING COURSES:

1. Swine Herd Operation

Outline of Course Units	No. of Hours
1. Introduction to Swine Production....	1
2. Feeding.....	16
3. Handling of swine.....	16
4. Work Procedures.....	8
5. Swine Herd Health.....	15
6. Swine barn mechanics.....	8
7. Records.....	8
8. Human Relations.....	8
TOTAL.....	80

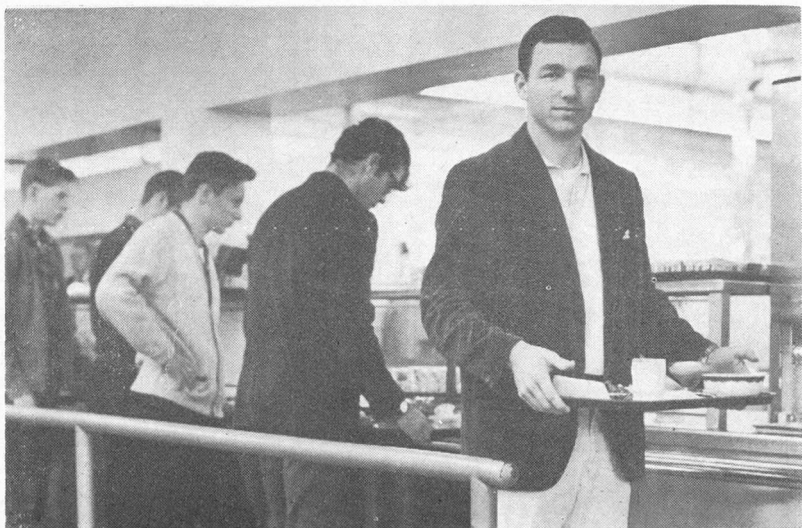
2. Greenhouse Crop Production

Outline of Course Units	No. of Hours
1. Introduction.....	$\frac{3}{4}$
2. The Plant.....	$2\frac{1}{4}$
3. Plant Environment.....	$10\frac{1}{2}$
4. Growing Practices.....	12
5. Plant Protection.....	6
6. Job Breakdowns and the Art of Giving Effective Instructions.....	3
TOTAL.....	$34\frac{1}{2}$

3. Operation and Repair of Farm Machinery

Outline of Course Units	No. of Hours
1. Use of basic tools and lubricants.....	20
2. Theory of operation of basic farm mechanics.....	20
3. Adjustment and Operation of basic farm machines.....	20
4. Maintenance and repair of basic farm machines.....	60
5. Inventory and records.....	10
6. Work Simplification.....	15
7. Human Relations.....	15
TOTAL.....	160

Additional vocational courses may be arranged in response to requests from farm and farm-related businesses.



ENTRANCE REQUIREMENTS

These are specific for each vocational course. In most cases, a candidate for admission must (a) be at least eighteen years of age, (b) present a satisfactory medical report, (c) demonstrate interest in the occupation he wishes to study, (d)

have a letter of recommendation from an existing or potential employer, and (e) present himself for interviews when required.

COST AND FINANCIAL ASSISTANCE

No tuition will be charged to students from the Atlantic Provinces.

Board at the Nova Scotia Agricultural College is \$19.00 per week.

The costs for books, student fees and other similar charges depend upon the length of the course, and the topics being covered. Rarely will such costs exceed twenty-five dollars.

Adults selected for training by the Canada Department of Manpower receive training allowances from that department. Adults seeking admission should therefore consult their nearest Canada Manpower office.

Location of Canada Manpower Centers in the Atlantic Region:

NOVA SCOTIA

Amherst—119 Victoria Street, P.O. Box 519

Bridgewater—743 King Street, P. O. Box 860

Halifax—Sir John Thompson Building, 1256 Barrington Street

Inverness—Federal Building, Railway Street

Kentville—495 Main Street

Liverpool—164 Main Street, P. O. Box 1288

New Glasgow—35 Donald Street

Springhill—68 Main Street, P. O. Box 2050

Sydney—308 George Street, P. O. Box 850

Sydney Mines—105 Main Street

Truro—15 Arlington Place, P. O. Box 670

Yarmouth—13 Willow Street

NEW BRUNSWICK

Bathurst—493 King Avenue, P. O. Box M

Campbellton—37 Roseberry Street, P. O. Box 490

Edmunston—Federal Building, 22 Emerson Street

Fredericton—626 Campbell Street

Minto—Swift Building, P. O. Box 129

Moncton—1081 Main Street

Newcastle—160 Henry Street

Saint John—93 Canterbury Street, P. O. Box 969

St. Stephen—93 Water Street
Sussex—48 Maple Avenue
Woodstock—Federal Building, Regent Street, P. O. Box 850

PRINCE EDWARD ISLAND

Charlottetown—Federal Building, Richmond Street
Summerside—288 Church Street

NEWFOUNDLAND

Corner Brook—Kawaja Building, 17 Broadway Street
Grand Falls—Dominion Government Building
St. John's—P. O. Box 1900

Young people from Nova Scotia who register for a vocational course and who must live away from home for two or more weeks while enrolled in a course may receive a living allowance of \$15.00 per week from Provincial funds.

Complete information on entrance requirements, cost and financial assistance, additional courses, and the time period for which each course is scheduled, can be obtained by writing the Registrar, Nova Scotia Agricultural College, Truro, Nova Scotia.

PRIZES

GOVERNOR-GENERAL'S MEDAL

A silver Medal was first offered for annual competition by His Excellency the Governor-General of Canada in 1914. It is awarded each year by the members of the faculty to the student of the graduating class who has attained the highest standing during his college course. In determining "highest standing", scholarship and leadership in student activities, in the order named, are the deciding factors in making this award.

THE H. J. FRASER MEMORIAL PRIZE FOR ENGLISH

In memory of the late Professor H. J. Fraser, a prize is awarded each autumn, on the recommendation of the English Department, to a second year student who achieved excellence in a first year English course at this institution.

MASTER FEEDS LIMITED PRIZES

Master Feeds Limited provides two prizes of \$25. each for highest standing in Second Year Technician Animal Nutrition. One is awarded to a student in Animal Science and one to a student in Agricultural Business.

SCHOLARSHIPS

ENTRANCE SCHOLARSHIPS (DEGREE COURSE) NOVA SCOTIA INSTITUTE OF AGROLOGISTS SCHOLARSHIP

The Nova Scotia Institute of Agrologists has provided a scholarship of \$250 for a resident of Nova Scotia entering the first year of the Degree Course at the Nova Scotia Agricultural College. In awarding this scholarship, the selection committee will take into consideration academic standing and financial need. Applicants should write to the Registrar, Nova Scotia Institute of Agrologists, N.S.A.C., Truro, N. S., for an application form, which will be available by July 1. The application and the applicant's Grade XI and Grade XII (if the applicant has one) certificates should be in the Registrar's office not later than September 1. 303

CANADA PACKERS LIMITED SCHOLARSHIPS

Canada Packers Limited offers a scholarship of \$250 to assist a student in entering or continuing in the Degree Course at the Nova Scotia Agricultural College. Candidates for this scholarship should have a good academic record and should have taken an active interest in community agricultural activity.

In making the above award, financial need will be taken into consideration. No application is necessary.

MARITIME STOCK BREEDERS' ASSOCIATION SCHOLARSHIPS

The Maritime Stockbreeders' Association offers three scholarships of \$250., one to a resident of Nova Scotia, one to a resident of New Brunswick, and one to a resident of Prince Edward Island. A candidate must be a graduate of a recognized high school in his province. This scholarship is designed to encourage students to take up agriculture as a vocation or profession. Academic standing and financial need will be taken into consideration in awarding the scholarship. Application for this scholarship must be made in writing to the Registrar on or before September 1.

An application form will be sent by the Registrar's office to those who so request.

PROVINCIAL SCHOLARSHIPS: NOVA SCOTIA, NEW BRUNSWICK, AND PRINCE EDWARD ISLAND

The Provinces of Nova Scotia, New Brunswick and Prince Edward Island offer scholarships to their residents entering the Degree Course at the Nova Scotia Agricultural College with high marks. Scholarships are awarded on the basis of Christmas and Easter school marks of the matriculation year and a recommendation from the Principal or on the basis of the provincial examinations. Application for consideration on the basis of school marks must be made before May 15; candidates with high provincial examination marks will be considered without an application. Candidates are urged to apply for consideration on the basis of school marks and a recommendation.

ENTRANCE SCHOLARSHIPS (DEGREE OR TECHNICIAN COURSE)

NOVA SCOTIA AGRICULTURAL COLLEGE ALUMNI SCHOLARSHIP

The Nova Scotia Agricultural College Alumni Association offers a scholarship of \$300.00 to a worthy student entering the first year of the Degree or Technician Course. Academic standing and financial need will be taken into consideration in awarding the scholarship. No application is necessary.

HENRY AUSTIN MEMORIAL 4-H SCHOLARSHIP

In memory of Henry Austin, a devoted friend to everyone and a dedicated leader who faithfully served the County of Cumberland for more than seven years as Agricultural Representative, a memorial fund has been established by his friends to provide an annual scholarship to a deserving 4-H Club member from Cumberland County attending first year in either the Technician or Degree Course at the Nova Scotia Agricultural College, or a Home Economics Course, at the College of his or her choice.

This fund will be administered by and the selection of the recipient will be made by the Scholarship Committee of the Cumberland County Federation of Agriculture.

The value of the scholarship at this time is \$100.00, payable in two parts: \$50.00 on successful completion of the first term and the balance on completion of the year's course.

Applicants must possess a Grade XI High School Certificate, have completed at least two years in 4-H club work in Cumberland County, and be recommended by a District Federation of Agriculture.

Selection will be made on the following basis:

1. Leadership ability and interest in community activities.
2. Scholastic standing and financial need.

Applications must be submitted to the Secretary of the County Federation of Agriculture, not later than August 31.

Application forms may be obtained from the Secretary of the District Federations of Agriculture in the candidate's area, or the Agricultural Office, Amherst.

LEONARD BEST MEMORIAL SCHOLARSHIP

The Nova Scotia 4-H Alumni Association presents a scholarship in memory of Leonard Greenwood Best. This scholarship is awarded annually to the most outstanding 4-H club member in Nova Scotia. The selection is made at the Provincial 4-H Leadership Week in Truro and is based on personality, leadership qualities, contribution to 4-H, and all-round ability. This scholarship, in the amount of fifty dollars, is to be used toward further education in any field (not applied for).

CANADIAN NATIONAL EXHIBITION SCHOLARSHIP FOR 4-H CLUB MEMBERS

The Canadian National Exhibition will award annually, in each province, a scholarship of the value of \$600. and an all expense trip to the Canadian National Exhibition to a candidate wishing to enter a degree course in Home Economics, a degree course in Agriculture, a degree course in Veterinary Medicine, or a technician course in Agriculture.

Candidates must be at least 17 years of age, have completed at least two years in 4-H Club work, and have shown qualities of leadership and an interest in community activities.

The successful candidate will receive his or her award at a fitting ceremony at the Canadian National Exhibition in the year in which it is won.

A successful candidate may have five years in which to take up his or her scholarship.

Application forms may be obtained from the Agricultural Representative.

ENTRANCE SCHOLARSHIPS

(TECHNICIAN COURSE)

MARITIME CO-OPERATIVE SERVICES LTD. BURSARIES

Maritime Co-operative Services Ltd. offers four bursaries of \$100. each to students entering the Technician Course.

The selection will be made on the following basis: (a) the recommendation of a local co-operative or district Federation of Agriculture, (b) need, and (c) potential for community leadership and/or co-operative endeavour.

Applications should be sent to Maritime Co-operative Services Limited, Box 750, Moncton, N. B., not later than August 31.

THE LORNE S. FISHER MEMORIAL SCHOLARSHIP

In memory of the late Lorne S. Fisher, a leader in and a good friend of farm organizations in his community, his county and his province, and a member of the Federation of Agriculture, the Cumberland County Federation of Agriculture has set up a scholarship of \$100.00, open to a candidate who is a son or a daughter of a Federation member and who is enrolled in 1968-69 in the Technician Course at this institution. The scholarship will be payable in two parts: \$50.00 on completion of the first year and \$50.00 on completion of the second year.

Applications must be approved by the District Federation of Agriculture and must be submitted to the Secretary of the Cumberland Federation of Agriculture by August 31. Application forms may be obtained from the Secretary of the District Federation of Agriculture in the candidate's area.

CONTINUATION SCHOLARSHIPS

(For students at the Nova Scotia Agricultural College.)

BRITISH AMERICAN OIL COMPANY SCHOLARSHIP

The British American Oil Company offers a scholarship of \$150.00 to a worthy student in the second year of the Degree Course. In awarding this scholarship, academic standing and financial need will be taken into consideration. No application is necessary.

IRA L. RHODENIZER MEMORIAL SCHOLARSHIP

The Nova Scotia Federation of Agriculture offers, as a memorial to the late Ira L. Rhodenizer, long time friend of organized agriculture and the 4-H movement, a scholarship of \$150 to a student in the Second Year Technician Class or the Second Year Degree Class. The recipient must be a Nova Scotian of high academic standing who has taken an active part in student affairs and has been active in the 4-H movement. The scholarship will be payable after the winner has registered for his second year. No application is necessary.

THE KENT FOODS CENTENNIAL SCHOLARSHIP

Cerebos (Canada) Limited, a subsidiary of Cerebos Limited, a world wide organization engaged in agriculture and food processing, and the parent company of Kent Foods, desirous of encouraging the study of agriculture, will provide, in recognition of Canada's centennial, a scholarship of \$250. to that student in the second year of the Degree Course who was, in the opinion of the Faculty, the leader in his or her first year. In making this award the Faculty will consider academic standing, leadership in student activities and qualities of good citizenship in the academic community.

THE DR. KENNETH COX SCHOLARSHIP

As a tribute to their retiring Principal, the Class of 1964 of the Nova Scotia Agricultural College established a fund of \$2000.00, the interest on which is to be awarded annually to a worthy student who has finished his second year and is entering the third year in agriculture. No application is necessary.

THE VICIOUS CIRCLE SOCIETY SCHOLARSHIP

A small number of graduates of the Degree classes of 1966 and 1967 who call themselves the Vicious Circle Society have established a scholarship of \$200. for a worthy Canadian student in the third year of the Degree Course. A reasonable academic standing and financial need will be taken into consideration in determining the winner. No application is necessary.

PROVINCIAL SCHOLARSHIPS: NOVA SCOTIA, NEW BRUNSWICK, AND PRINCE EDWARD ISLAND

The Provinces of Nova Scotia, New Brunswick and Prince Edward Island offer scholarships to their residents registered in the second or third year of the Degree Course at the Nova Scotia Agricultural College who have attained a high standard on the work of the previous year. No application is necessary.

CONTINUATION SCHOLARSHIPS

(For graduates of the Nova Scotia Agricultural College registered at other institutions.)

MACDONALD COLLEGE SCHOLARSHIP

Macdonald College offers a scholarship of \$800 to the student of the Nova Scotia Agricultural College who obtains the highest standing in the work of the third year of the Degree Course in that College, and who subsequently registers in the fourth year at Macdonald College. The scholarship will be paid in two instalments: half at the beginning of the fourth year, half at the beginning of the fifth year.

CANADA PACKERS LIMITED SCHOLARSHIP

Canada Packers Limited offers a scholarship of \$250 to a worthy student who has satisfactorily completed the three year Degree Course at the Nova Scotia Agricultural College and who elects to continue in an Animal Husbandry, Poultry or General Agriculture option at some Canadian Agricultural College. Application for this scholarship must be made to the Registrar before April 15 of the applicant's final year at the Nova Scotia Agricultural College.

In making the above award, financial need will be taken into consideration.

KETCHUM MANUFACTURING COMPANY LIMITED SCHOLARSHIP

The Ketchum Manufacturing Company Limited has provided a \$1,000 Dominion of Canada Bond, the interest on which is to be used for an annual scholarship available to an Nova Scotia Agricultural College graduate registered in a Animal Husbandry option. The scholarship will be awarded to a worthy student with a satisfactory academic standing. Application for this scholarship must be made to the Registrar before April 15 of the applicant's last year at the Nova Scotia Agricultural College.

MARITIME CO-OPERATIVE SERVICES LIMITED SCHOLARSHIP

Maritime Co-operative Services Limited offers a scholarship of \$100.00 to a graduate of the Nova Scotia Agricultural College from the Maritime Provinces entering the final two years at an approved agricultural college. The scholarship will be awarded on the following basis:

- (a) scholastic ability,
- (b) financial need,
- (c) knowledge and appreciation of co-operatives.

Application forms may be obtained from the Principal of the Nova Scotia Agricultural College.

Applications must be in the hands of the Principal by April 1.

ASSOCIATED SUPPLIERS OF THE NOVA SCOTIA CREAMERY, ICE CREAM AND MILK DISTRIBUTORS' ASSOCIATION SCHOLARSHIP

The Associated Suppliers of the Nova Scotia Creamery, Ice Cream and Milk Distributors' Association offer a scholarship of \$700.00 to a student who has satisfactorily completed the three year Degree Course at the Nova Scotia Agricultural College and who subsequently registers in a Dairy Science option. Application for this scholarship should be made to the Registrar before April 15 of the applicant's final year at the Nova Scotia Agricultural College. There is no application form.

THE COLLEGE WINTER FAIR

During each College year, about the middle of the Second Term, the students put on a College Winter Fair, or College Royal, as it is frequently called. The show is a competition in fitting and showmanship rather than a contest among the horses, cattle, sheep, swine and poultry used in the exhibition.

In addition to livestock classes, the show also features competition in Agronomy, Horticulture and Farm Management and a series of educational demonstration booths.

The program and show are administered by students who hold the various offices necessary for the satisfactory operation of an exhibition.

ENROLLMENT 1967-68

FIRST YEAR DEGREE

- Miss C. J. Adams, 4865 Queen Mary Road, Apt. 6, Montreal 26.
J. T. Archibald, 135½ Willow Street, Truro, N. S.
H. E. Bent, Box 305, Annapolis Royal, N. S.
D. G. Butler, 47 Brook St., Box 688, Stephenville, Nfld.
R. P. Carmichael, Box 72, Centreville, N. B.
G. R. Coldwell, Port Williams, King Co., N. S.
N. B. Comeau, Meteghan, Digby County, N. S.
J. W. Connor, Box 158, Perth, Ontario
L. D. Cudmore, 39 White's Road, Box 509, Deer Lake, Nfld.
C. F. DeNuke, R.R. 2, Granville Beach, Annapolis Co., N. S.
G. H. Dill, 14 Charles Ct., Truro, N. S.
T. K. Doncaster, Sussex Corner, Kings Co., N. B.
B. W. Dykeman, Sussex, R. R. #4, Kings Co., N. B.
T. G. Forsythe, R. R. #3, Kentville, Kings Co., N. S.
G. D. Frame, Shubenacadie, R. R. #2, Hants Co., N. S.
J. L. Fraser, P. O. Box 265, Inverness, N. S.
G. W. A. Fraser, 10 Summit Ave., New Glasgow, N. S.
P. B. Gilliatt, Granville Center, N. S.
Miss F. E. Goodfellow, R. R. #1, Valcartier Village, Quebec
M. E. Gourley, 264 Place de Brullon, Boucherville, Quebec
W. F. Gourley, 9 Chestnut Place, Kentville, N. S.
A. H. deGraaf, R. R. #2, Port Williams, N. S.
W. R. Hansen, Pugwash, R. R. #3, Cumberland Co., N. S.
H. R. Hards, 306 1st East, Cornwall, Ontario
B. C. Hubbard, 187 Edinburgh Drive, Moncton, N. B.
K. S. Johnson, 622 deLery Blvd., Ville de Lery, Quebec
R. R. Keeler, Ormstown, Quebec
I. S. B. Keay, 749 Island Park Drive, Ottawa 3
Miss A. D. Keough, Aquaforte, S. Shore, Newfoundland
J. A. Killam, R. R. 1, Riverglade, N. B.
J. F. L. Knight, Young's Cove Road, Queens Co., N. B.
L. J. Lawson, R. R. 5, Woodstock, N. B.
R. A. Lewis, York, P. E. I.
Miss B. B. Mann, Chatham Head, N. B.
R. J. May, 55 Monteith Ave., Westmount, Sydney, N. S.
A. F. Melanson, R. R. #6, Amherst, N. S.
N. E. Mitchell, P. O. Box 234, Bridgetown, N. S.
D. S. Mosher, 7 Major St., Dartmouth, N. S.
J. H. J. Murphy, R. R. #5, Kensington, P. E. I.
M. C. Murray, 22 Reade St., Moncton, N. B.
M. H. McGill, 81 Victoria St., Saint John, N. B.
A. W. MacKay, Claremont Ave., Stellarton, N. S.

W. R. MacLaine, Rice Point, Clyde River P. O., P. E. I.
 M. J. McNamara, Silver Falls, St. John, N. B.
 P. P. Persaud, 65 Bel Air East C., Demerara, Guyana
 L. H. Phillips, 4 Glendon Dr., Kingston, Jamaica
 W. D. Pickard, 2793 Connolly St., Halifax, N. S.
 M. R. Pierce, R. R. #1, Denmark, Colchester Co., N. S.
 Miss J. M. Reinhardt, R. R. #1, Brooklyn, Queens Co., N. S.
 T. P. Ronan, 4 Poplar St., James Park, St. Huberts, P. Q.
 R. H. Rowat, 185 Duke of Kent Ave., Pointe Claire, Que.
 G. F. Searle, R. R. #3, Truro, N. S.
 G. E. Sheehy, 181 Main St., Middleton, N. S.
 J. W. Sheppard, 69 Victoria St., St. John, N. B.
 M. A. S. Sheriff, 177 Lamaha & DeAbreu Sts., Newtown Kitty, E. C. D.
 D. R. Smith, 709 Hanson St., Fredericton, N. B.
 K. H. Smyth, R. R. #2, Lennoxville, Quebec
 G. R. Stewart, P. O. Box 732, Woodstock, N. B.
 E. M. Thompson, West Brook, Cumberland Co., N. S.
 B. C. Thorne, 877 York St., Fredericton, N. B.
 R. G. Titus, Sussex, R. R. #1, N. B.
 K. A. Veinot, Bridgewater, R. R. #2, Lunenburg Co., N. S.
 J. R. Weatherhead, Upper Rawdon, Hants Co., N. S.
 W. B. Welling, Dorchester Crossing, R. R. #1, N. B.
 A. J. Wilson, Bridgetown, R. R. #4, N. S.
 A. W. Wort, 45 Cambridge St., Woodstock, N. B.

SECOND YEAR DEGREE

F. J. E. Arsenault, Jacquet River, New Brunswick
 C. R. Atkinson, R. R. #7, Amherst, Nova Scotia
 E. B. Barnhill, 79 Lansdowne St., Sackville, N. B.
 G. N. Birrell, 339 Stanstead Ave., Montreal 16, P. Q.
 J. N. Blair, Franklin Center, Quebec
 W. A. Bolhuis, Box 190, Mineville, Halifax County, N. S.
 D. R. Carruthers, Tatamagouche, Nova Scotia
 J. C. Colwill, Northam, Prince Edward Island
 W. E. Ebbett, 76 Greenwood Drive, Moncton, N. B.
 R. A. Eisner, 90 Smith Avenue, Truro, Nova Scotia
 Miss L. J. Ellis, Brookfield, Nova Scotia
 R. P. Foote, Box 182, Berwick, Kings Co., N. S.
 D. W. Gammell, Newton Mills, Colchester Co., N. S.
 J. W. Harris, R. R. #2, Summerside, P. E. I.
 P. A. Hendrickson, 34 Sweet Briar Drive, Beaconsfield, P. Q.
 E. G. Hendsbee, R. R. #4, Mabou, Nova Scotia
 B. H. Heywood, 282 Alesworth Ave., Scarborough, Ontario
 D. E. Himelman, 31 Francis St., Dartmouth, N. S.
 D. A. Hiscock, R. R. #2, Plaster Rock, N. B.
 A. T. G. Hutchinson, 106 Richard St., East Saint John, N. B.

W. A. Melanson, R. R. # 6, Amherst, Nova Scotia
 W. J. Meyer, Cornwall, R. R. # 2, Ontario
 L. G. Murphy, Sea View, R. R. # 2, P. E. I.
 K. C. MacDonald, 96 Lyman St., Truro, N. S.
 W. A. MacKay, R. R. # 5, Tatamagouche, N. S.
 R. D. Neilson, R. R. # 2, Fredericton, N. B.
 M. M. Parker, Newport, R. R. # 3, Hants Co., N. S.
 Miss P. J. Pugh, Tatamagouche, N. S.
 C. M. Rice, R. R. # 3, Bridgetown, N. S.
 G. S. H. Selig, Wilmot Station, Annapolis Co., N. S.
 B. A. Singh, DeHoop, East Coast Demerara, W. I.
 C. C. Sparkes, P. O. Box 2068 W, St. John's, Nfld.
 E. R. Thompson, R. R. # 3, Moncton, N. B.

FIRST YEAR TECHNICIAN

J. L. Austin, R. R. # 2, Whycocomagh, N. S.
 G. T. Boutilier, 127 Westmount Road, Sydney, N. S.
 A. E. Burgher, Research Station, Kentville, N. S.
 H. H. Cairns, New Wiltshire, R. R. # 2, P. E. I.
 R. B. Caseley, Kensington, R. R. # 4, P. E. I.
 D. W. Castle, Gays River, R. R. # 1, N. S.
 P. G. Cyr, St. Basile, N. B.
 C. R. Doyle, 112 Park St., Truro, N. S.
 H. Dunnewold, R. R. # 2, Scotsburn, N. S.
 G. D. Edwards, 69 Granville St., Bridgetown, N. S.
 P. R. Floris, Paradise, R. R. # 1, Annapolis Co., N. S.
 J. E. Fraser, Antigonish, R. R. # 1, N. S.
 P. J. Geense, Truro, R. R. # 1, N. S.
 J. G. Gillespie, New London, P. E. I.
 J. W. Gillespie, Clyde River, P. E. I.
 C. A. Harrison, Fredericton, R. R. # 2, N. B.
 M. P. Howlett, Goulds, St. John's South, Nfld.
 R. R. Hubley, Shubenacadie, R. R. # 2, N. S.
 L. J. Hudson, Port Wade, Annapolis Co., N. S.
 C. L. Jenkins, Charlottetown, R. R. # 1, P. E. I.
 E. R. Kidston, Port Williams, R. R. # 1, N. S.
 C. R. Killen, Middle Musquodoboit, R. R. # 3, N. S.
 A. H. Knol, Oxford, N. S.
 E. G. Lawton, Pownal, P. E. I.
 Miss H. A. Logan, Upper Stewiacke, N. S.
 J. R. Long, Clair, N. B.
 E. A. Longley, Lawrencetown, Annapolis Co., N. S.
 J. E. Mills, Annandale, P. E. I.
 Miss M. A. Mosher, 128 Smith Ave., Truro, N. S.
 Miss J. R. Murray, 70 Walker St., Truro, N. S.
 E. L. MacGillivray, Maryvale, R. R. # 3, N. S.

H. S. MacKay, Albany, P. E. I.
 S. J. McKay, Truro, R. R. # 5, N. S.
 D. A. McLaughlin, Cliffordvale, N. B.
 G. E. Nickerson, Queenstown, Queens Co., N. B.
 P. E. Nunn, Summerville, Hants Co., N. S.
 Miss M. A. Quinn, 174 Victoria Road, Dartmouth, N. S.
 R. B. Oikle, 93 School St., Middleton, N. S.
 G. O. Pickett, Andover, N. B.
 E. W. Porter, Belcher St., Port Williams, N. S.
 C. W. Purdy, Malagash, Cumberland Co., N. S.
 U. D. Robichaud, St. Charles, R. R. # 1, N. B.
 Miss J. E. Shewchuck, Marconi Post Office, Tower Road, C.B., N. S.
 Miss J. A. Smith, Upper Falmouth, Hants Co., N. S.
 P. E. Soucy, St. Basile, N. B.
 R. P. Stone, 82 Woodland Drive, Moncton, N. B.
 B. J. Sullivan, Site 24, Box 8, St. John's South, Nfld.
 J. G. Tattrie, c/o Mr. Don MacLanders, R. R. # 3, New Glasgow, N. S.
 B. B. Thompson, Albany, R. R. # 1, North Tryon, P. E. I.
 D. A. Thompson, Dunstaffnage, R. R. # 3, Charlottetown
 D. O. Townsend, R. R. # 2, Truro, N. S.
 R. Van Hattem, R. R. # 2, Cambridge, Kings Co., N. S.
 D. W. Vernon, 3206 Pennington Ave., Halifax, N. S.
 J. A. Weyman, 589 Roost St., Glace Bay, N. S.
 D. A. Wood, R. R. # 2, York, P. E. I.
 B. D. Woodland, R. R. # 1, Annapolis Royal, N. S.

SECOND YEAR TECHNICIAN

R. F. Anderson, Andover, R. R. # 1, New Brunswick
 D. J. Butler, Avondale, R. R. # 1, Pictou Co., N. S.
 D. J. Cudmore, North Winsloe, Prince Edward Island
 R. H. Farquharson, P. O. Box 75, Kensington, P. E. I.
 W. C. Gammell, Main Street, Westville, Nova Scotia
 R. G. Grant, Kenross P. O., R. R. # 2, P. E. I.
 W. F. Grant, Milford Station, Hants Co., N. S.
 J. L. MacAfee, 628 Beaverbrook St., Fredericton, N. B.
 J. F. MacNaughton, Box 416, North St., Westville, N. S.
 B. M. Mahoney, P. O. Box 98, Bath, New Brunswick
 R. St. C. Mailman, Bridgewater, R. R. # 1, Nova Scotia
 J. A. Pierce, R. R. # 3, Kingston, Nova Scotia
 J. B. Roze, 17 Ellis Road, Yarmouth, N. S.
 F. I. Smith, Pownal, Prince Edward Island
 R. L. Thompson, North Milton, Prince Edward Island
 A. E. Trenholm, R. R. # 7, Amherst, Nova Scotia
 F. J. Underhay, Bay Fortune, Prince Edward Island

SECOND YEAR DIPLOMA

- V. M. Baltzer, Aylesford, Kings Co., Nova Scotia
L. J. Buote, Hunter River, R. R. #3, P. E. I.
B. R. Cameron, Box 11, Loggieville, N. B.
J. L. Campbell, North Grant, R. R. #3, Antigonish Co., N. S.
R. L. Carr, Miscouche, P. E. I.
G. R. Cox, Shubenacadie, R. R. #3, N. S.
R. A. Feeney, Harvey Station, New Brunswick
M. S. M. Gielen, Millville, R. R. #1, Cape Breton Co., N. S.
D. G. Lea, Vernon River, P. E. I.
R. L. Leighton, Summerside, R. R. #1, P. E. I.
T. W. Lutz, Berwick, R. R. #4, Nova Scotia
J. C. MacBeth, St. Peter's, Prince Edward Island
G. C. H. MacLeod, R. R. #1, Sydney, Nova Scotia
R. B. Matheson, 37 Division St., Bedford, Nova Scotia
R. McK. Parker, Cambridge Station, R. R. #2, N. S.
R. G. Parker, Truro, R. R. #5, Nova Scotia
I. W. Smith, Box 33, Mabou, Nova Scotia
B. R. Upward, Cormack, Newfoundland
A. VanBerkel, R. R. #5, Antigonish, Nova Scotia
C. N. Wamanji, P. O. Box 280, Thika, Kenya, East Africa
R. E. Wile, Bridgewater, R. R. #1, Nova Scotia

