

AGRICULTURAL ENGINEERING ACTIVITIES IN CANADA

PRESENT AND FUTURE

EDUCATIONAL ASPECTS

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Present Facilities and Programs

A review of the Agricultural Engineering Programs offered at institutions in Canada can be summarized by the following statement and table.

All Agricultural Engineering De-

partments offer some courses in the traditional fields: power, machinery, soil and water, structures and electrification. In addition, the Engineering Science Department of Ontario Agricultural College offers a number of

basic engineering courses.

Most Departments are well equipped with typical Agricultural Engineering facilities (dynamometers, fuel and oil equipment, hydraulic laboratory, irrigation equipment).

TABLE

Department	Faculty Administration by:	Degrees offered	Staff	
			Full Time	Part Time
MacDonald College (McGill)	Agriculture	B.Sc. (Agriculture) major in Ag. Eng.	3	—
O.A.C. and Univ. of Toronto	Agriculture (O.A.C.) and Engineering (Univ. of Toronto)	B.S.A., M.S.A., (Ag. Mech.) B.A.Sc. (Mech., Civil)	19	2
Manitoba	Agriculture	B.S.A. (Ag. Mech.)	1	—
Saskatchewan	Engineering	B.S.A. (Ag. Mech.) B.E., M.Sc.	8	10
Alberta	Agriculture	B.Sc. (Agriculture) major in Industrial Ag.	2	—
British Columbia	Engineering and Agriculture	B.S.A., M.S.A., B.A.S.c.	5	2

Recent and Proposed Developments at the various colleges in Agricultural Engineering Teaching

Macdonald College

Some changes in courses are planned so that students graduating from Macdonald College in four years from Junior Matriculation with a B.Sc. (Agriculture) can enter McGill University and obtain a Professional Engineering (B.E.) degree in two years of further study. This degree would be in the Mechanical Engineers specialty.

It is also stated that increased emphasis will be placed on fundamental engineering science to keep pace with contemplated changes at McGill.

Research work will be increased materially and a research and teaching appointment is expected.

Ontario Agricultural College

Present plans at Ontario Agricultural College call for a re-scheduling of some of the engineering courses to bring them in earlier in the program. An increased emphasis will be given to Agricultural Engineering and decreased emphasis on Agricultural Mechanics.

A future objective is a 4 or 5 year degree program in Agricultural Engineering. To achieve this, further emphasis will be given to physical and

engineering sciences with a better integration of biological sciences and more functional agricultural courses.

Research will be expanded to permit broader post-graduate teaching at the Master's level. The Ph.D. degree is another future objective.

Manitoba

A new curriculum was put into operation for the 1957-8 session. Two degrees are offered: B.S.A. and B.S.A. (Hon.). The B.S.A. (Hon.) is designed for students going into research. The B.S.A. general degree has a number of sequences, including Agricultural Mechanics, available to the students.

The Agricultural Mechanics sequence now provides increased work in the Physical Sciences and Humanities while the Biological Sciences have been reduced. It is felt, however, that the students coming into third year are overbalanced in the Humanities, Social and Biological Sciences and are still lacking in Engineering background.

An immediate objective is to increase the academic staff to three. This would allow an increase in the number of classes offered to Agricultural students.

Saskatchewan

It is planned that classes in Rural Electrification and Processing be offered to Agricultural Engineering students as soon as possible.

Alberta

A major in the Department of Agricultural Engineering, tentatively called Industrial Agriculture has been added to the recently revised Agricultural curriculum. The main emphasis in this major is on Agricultural Production Engineering.

For this major, the Department of Agricultural Engineering offers a course in Production Engineering as a third year requirement together with fourth year courses in Heating, Ventilating and Air Conditioning; Structures; Power Units and Agricultural Machine Elements; Materials Handling and Processing; and a Project course associated with the problems involving materials handling, equipment selection and production layout.

British Columbia

The Department stated that they are unable to reveal proposed changes at the present time.

