

## A BRIEF HISTORICAL REVIEW

The need for a professional Organization had been recognized for several years by a number of scientists engaged in agricultural pursuits. Five such men convened a meeting in a small room in Ottawa on the evening of Friday, October 10, 1919. They discussed the possibility of bringing together all Canadians of like mind and engaged in scientific, administrative, experimental or investigational work in agriculture, or in any work of a similar nature. The Chairman was M.B. Davis, the others were: F.H. Grindley, G. LeLacheur, F.L. Drayton and F.E. Buck. At the close of the meeting they tentatively adopted the name - The Canadian Society of Technical Agriculturists (C.S.T.A.) and appointed Fred Grindley as the Secretary-Treasurer of the organizing committee.

Their efforts culminated in an organizational meeting held in Ottawa in June, 1920, which saw 411 members enrolled in the new Society. The official organ was designated 'Scientific Agriculture' which commenced publishing a few months later. The first President of the new Society was Dr. L.S. Klinck, who would later become President of the University of British Columbia; the two Vice-Presidents were Professor John Bracken, later premier of Manitoba and Dr. H. Burton, later Dominion Deputy Minister of Agriculture. L.H. Newman, Dominion Cerealist, was the first Honorary Secretary and Fred H. Grindley was the General Secretary, a post he held until his untimely death in 1930.

At the first annual convention held at Winnipeg in June, 1921, President Klinck, in addressing the members, established three major objectives of the new Society:

1. "insistence upon higher academic standards for undergraduates and larger opportunities and better facilities for post-graduate courses", and also, "greater insistence upon and more adequate provision for, investigation and research."
2. "more co-operation between the workers in the Dominion and Provincial Departments of Agriculture, and these, in turn, with those who are engaged in college work". He went on to say, "The interests of agriculture and of the technical men engaged therein can no longer be served by individuals working singly or in small isolated groups. The issues involved have become too large and the ramifications too numerous and far-reaching for individual action to be effective."
3. "technical knowledge and skill justly entitle the professor to professional standing, to merited recognition, and to financial returns commensurate with the service rendered." He further commented - "Technical agriculturists have been among the last of the professional men to organize."

These subsequently became embodied in the Constitution (ARTICLE 2), with other additions as the nine OBJECTS of the Society. Three other articles are reproduced in part for historical interest:

#### ARTICLE 5 (Constitution) ORGANIZATION

The organization of the Society shall be:

- a) The Dominion Executive, consisting of the officers and members provided for in Article 4.\*
- b) The Provincial Executives.
- c) The Local Branch Executives.

\*namely - President, First and Second Vice-Presidents, honorary Secretary-Treasurer and one member of each 'provincial' executive. (Provincial was amended in 1922 to read 'local'.)

#### ARTICLE IV (By-Laws) MEETINGS

2. Each Local Branch shall be entitled to send one delegate for every 20 members and any majority fraction of 20 members.
3. Except when otherwise specified in the By-Laws, all voting at conventions is reserved for official delegates.

#### ARTICLE V (By-Laws) FEES

The membership fees shall be \$10.00 per annum of which \$2.00 shall go to the Local Branch. The fee shall be payable either to the Local Secretary or to the General Secretary.

By September 1921, membership had grown to 600 with 13 local branches representing most of the Provinces. While special groups were active within the Society, they did not appear to be recognized as such in the Constitution. The following is an abstract from the Editorial appearing in Scientific Agriculture, December, 1921:

"It is not very many years since Rural Engineering took its place as a distinct subject in an agricultural course and even today comparatively little investigational work is being undertaken in this subject. But almost every agricultural college instructs its students in Rural Engineering because, on the modern farm, a knowledge of machinery, irrigation, mechanical power, drainage, cold storage, etc., is vital. It was found that ordinary engineering principles could not always be applied to agriculture and that a special study of special problems was necessary.

From this beginning, rapid but fairly recent advances have been made and today Rural Engineering is not only taught to agricultural students but is recognized as a scientific subject, and in the field of research - if we give the word a broad interpretation - is already making some contributions. Comparatively recently the American Society of Agricultural Engineers came into existence and will give progress in this subject still further impetus."

In the same issue of Scientific Agriculture, J.M. Smith, Professor of Agricultural Engineering, University of Alberta, and a member of the Editorial Board for the division of Rural Engineering, was very anxious that the division should not be a one-man department within the Editorial Board, and that he would welcome any material that may be sent in for publication. He was confident there were sufficient numbers of men engaged in Rural Engineering work in Canada to make this a real live department.

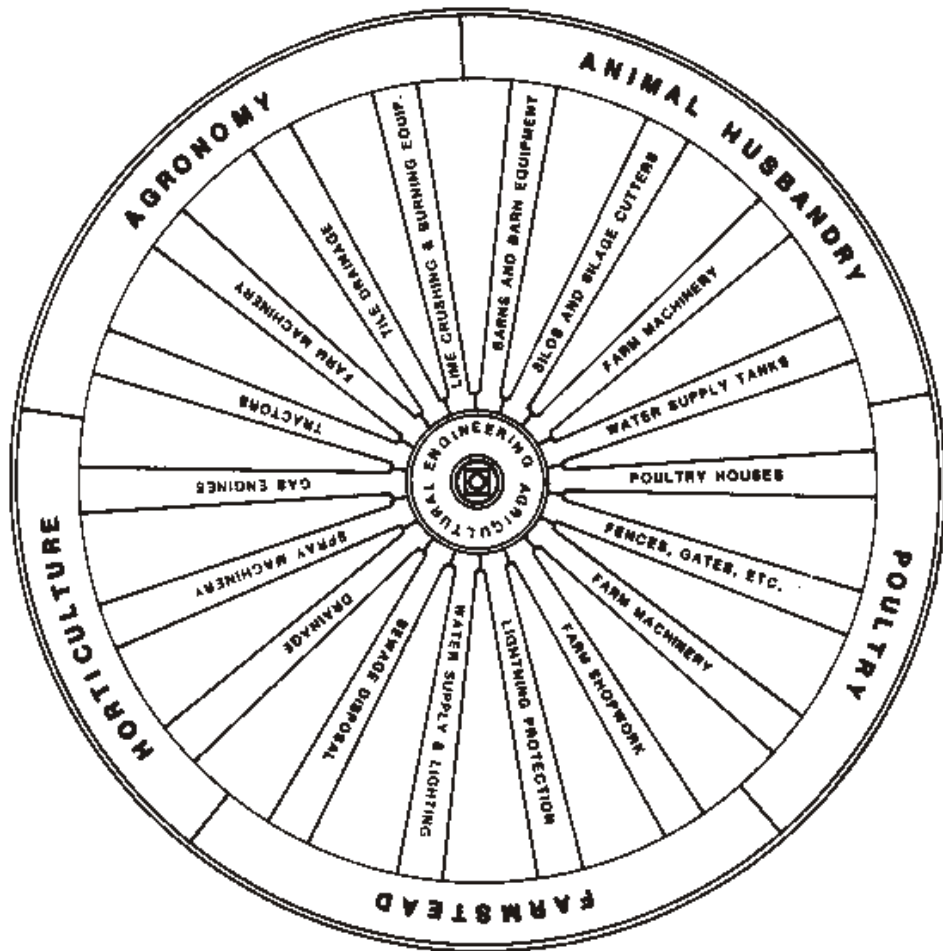
The following year, the Committee on Research of C.S.T.A. prepared a list of suggested subjects for investigation. There were four items under Agricultural Engineering:

1. An attempt to find a surfacing material for cattle stalls which has all the good qualities of sand and gravel concrete and which is warmer, drier and less hard.
2. The length of life, reliability and standardization of commercial "prepared roofings".
3. The cost of production and storage of electric current, by means of the gas-engine-driven lighting plant and storage batteries, to be ascertained under farm conditions over a term of at least four years.
4. The effect of muck soils on thin-walled concrete field drainage tile.

A number of agricultural engineers have attempted to identify and define their role as a segment or branch of Professional Agriculture in Canada. Perhaps the one who said it best was Louis G. Heimpel, Department of Agricultural Engineering, Macdonald College, Que., in an article titled "Agricultural Engineering and Its Place in Canadian Agriculture"

"... Among the branches of Professional Agriculture, in our colleges from coast to coast, in our government departments of Agriculture, both federal and provincial, and in the amounts of money spent to forward our various messages to the student and to the farmer, we are one of the 'little sisters' if not the 'weak sister'. True, in the majority of our colleges there is an 'Agricultural Engineering Department' headed by a professor, but in several instances engineering work is broken up between departments of physics and the farm mechanics branches of the institutions....

... What the mining engineer is to the mining industry and what the chemical engineer is to that industry the agricultural engineer must be to Canadian agriculture."



Facsimile of a graph prepared by Professor Heimpel, illustrating Agricultural Engineering support by subject matter to the four major Agricultural disciplines.

## Agricultural Engineering Group - C.S.T.A.

While the various Groups within the Society, including the Agricultural Engineering Group, had been meeting from the time of its inception, it was not until the Winnipeg Convention in 1932 that the Agricultural Engineering Group officially organized itself as such, with Professor G.L. Shanks, Manitoba Agricultural College, acting as President and Professor L.G. Heimpel, Macdonald College, acting as Secretary.

The second annual meeting of the Agricultural Engineering Group was held at Regina College during the World's Grain Exhibition and Conference in July, 1933. Agricultural Engineering was given a prominent place when the Grain Conference Programme Committee invited Mr. E.J. Stirniman, Consulting Agricultural Engineer of Brooklyn, Iowa, to open the conference session with a paper on "The Mechanization of Agriculture in Russia". During the Agricultural Engineering Group sessions, 24 papers were read on various economic and technical problems of mechanization.

The following executive officers of the Agricultural Engineering Group of C.S.T.A. were elected for 1933-34:

Chairman	-	F.L. Ferguson, O.A.C., Guelph, Ontario
Vice Chairman	-	E.A. Hardy, University of Saskatchewan, Saskatoon
Secretary	-	L.G. Heimpel, Macdonald College, Que.

The Agricultural Engineering Group also constituted itself, at this meeting, as the Canadian Section of the American Society of Agricultural Engineers, of which society most of the group were members. The same executive was to serve both organizations.

The Third Annual Meeting of the Agricultural Engineering Group was held at the time of the 14th Annual Convention of the Canadian Society of Technical Agriculturists, at Macdonald College, June 25-28, 1934. The papers presented before the Group were assembled for publication in the March, 1935, issue of C.S.T.A. - Review, by the Secretary, Professor L.G. Heimpel. Professor F.L. Ferguson, Chairman of the Executive presided. Officers elected for 1934-35 were as follows:

Chairman	-	Professor J. MacGregor Smith, University of Alberta, Edmonton
Vice Chairman	-	Mr. J.M. Armstrong, Cereal Division, Central Experimental Farm, Ottawa
Secretary	-	Professor E.A. Hardy, University of Saskatchewan, Saskatoon.

The records are incomplete from this point onward and including the time of the second World War. However, it is assumed that the Engineering Group met at times during the annual conventions of the Canadian Society of Technical Agriculturists.

About the same time, a considerable amount of Agricultural Engineering technical development was carried out through the Western and Eastern Canada Committees on Agricultural Engineering. These were primarily made up of provincial and federal government employees and University members. The Western committee was headed by Grant Denike and the Eastern committee by Jim Armstrong. These Committees eventually became the National Committee on Agricultural Engineering (N.C.A.E.). In 1947, the records show J.M. Armstrong, Agricultural Engineer, Experimental Farms Service, Ottawa, as Chairman of the N.C.A.E.; L.B. Thomson, Chairman, Western Section; and P.O. Ripley, Chairman, Eastern Section.

The National Committee on Agricultural Engineering was the forerunner of the present day Canada Committee on Agricultural Engineering Services (C.C.A.E.S).

#### Agricultural Engineering Section - A.I.C.

At the Silver Jubilee Convention of the Canadian Society of Technical Agriculturists held at Saskatoon in June, 1945, the name of the Society was changed to AGRICULTURAL INSTITUTE OF CANADA; and an expanded program of service to the industry and the profession was undertaken. The name of the official organ was also changed from C.S.T.A. - Review to the 'Agricultural Institute Review', and commencing with the January, 1946, issue, the magazine appeared on a bi-monthly basis instead of quarterly.

On June 26, 1946, a meeting was held in Room 101 of the Agricultural Building, Macdonald College. It was chaired by L.B. Thomson, Superintendent, Experimental Station, Swift Current, Saskatchewan, and National President of the Agricultural Institute of Canada. The recording secretary was C.G.E. Downing, Head, Agricultural Engineering Department, Ontario Agricultural College, Guelph. Others in attendance were G.N. Denike, Swift Current, Saskatchewan; J.H. Cooper and M.J. Bourne, Macdonald College; J.M. Armstrong and F.W. Graves, Ottawa; A.M. Duckham from the British Embassy, Washington, D.C.; S.L. Tallman, Toronto; J.M.F. MacKenzie, Fredericton, N.B.; W.A. Thomson, Regina; W.C. Wood, F.L. Ferguson, H.W. Kitching, and J. Laughland, all from Guelph.

The purpose of the meeting was to organize an Agricultural Engineering Section or Division within the A.I.C. The newly elected Executive included: W.C. Wood as President; G.N. Denike, Vice-President; C.G.E. Downing, Secretary; Professor J. MacGregor Smith to represent the West and Professor Angus Banting to represent the East.



It is assumed they were accepted as a Section in the A.I.C., as the program for the A.I.C. Convention held at the Ontario Agricultural College, June 1948, lists them as such. A Section constitution was adopted in 1952. Members of the Agricultural Engineering Section paid only the A.I.C. fees and received the 'A.I.-Review' (1945-71) later 'Agrologist' (1972-date) and 'Scientific Agriculture' (1920-52) later 'Canadian Journal of Agricultural Science' (1953-56). The A.I.C. was re-organized and in 1956 the Canadian Journal of Agricultural Science was terminated and replaced by specific journals in the fields of animal, plant and soil science.

#### Canadian Society of Agricultural Engineering

Concurrent with the developments in the A.I.C. was a much keener interest and activity with the A.S.A.E. The North Atlantic section of A.S.A.E. had been designated as the International section of the Society, and in early 1940 the Annual meeting was held at Toronto, and in 1948 at the O.A.C. in Guelph. Up to 1955 two Canadians, Louis Heimpel and Glenn Downing had served as Chairman of the section and a number of Canadians were serving on A.S.A.E. committees; thus there was real interest in developing further international relations with Canada.

At the 36th Annual A.I.C. Convention, at the University of Toronto, June 25-28, 1956, the Agricultural Engineering Section agreed to the formation of a Committee to investigate the possibility of forming an agricultural engineering society. The appointed committee of J.E. Beamish, J.T. Kyle and Wm. Kalbfleisch with assistance from R.P. Frey and J.S. Parker, presented their "Report of the Committee to Review the Formation of an Agricultural Engineering Society" at the Annual Section meeting in Vancouver, June 25, 1957, after having investigated several possibilities, including that of a Canadian Society associated with the A.S.A.E. The report recommended "that a Canadian Agricultural Engineering Society be formed and that this society become affiliated with the A.I.C."

At the A.I.C. Business Meeting, T.L. Coulthard, 1956-57 Chairman of the Agricultural Engineering Section, in his Section Report, announced that the highlight of their deliberations was the unanimous decision to form the Canadian Society of Agricultural Engineers. Efforts would be made during the coming year to prepare a constitution and by-laws for the new Society which, he reported, would look forward to affiliation with the A.I.C. The Executive officers for the new Society were named as follows:

President	-	J.S. Parker, Amherst, N.S.
Vice President	-	E. Hudek, Winnipeg, Manitoba
Secretary/Treasurer	-	H.D. Ayers, Guelph, Ontario

The following year was a busy year for the dedicated founders of the proposed new Society. Hugh Ayers, as Secretary, maintained the communication links between organizers, members and other related societies. The active promoters included Grant Denike in the West; Glenn Downing, Central; and Arnold Roberts in the East. Ray Frey maintained many personal contacts as he travelled across the country for Imperial Oil. The Constitution Committee was composed of Jim Beamish, Oliver Syms and Ray Frey.

In the spring of 1958 the proposed Constitution was mailed for comment to about 200 potential members whose addresses were gleaned from the A.I.C. and A.S.A.E. membership lists, and graduates of agricultural engineering and agricultural mechanization programs in Universities and Colleges across Canada. Returns were not numerous but gave sufficient encouragement to proceed.

The first major problem was the proposed name. Since there were more agricultural graduates with specialization in Agricultural Engineering than graduates in engineering, the title Society of Agricultural Engineers, similar to the A.S.A.E., would have required associate or affiliate member classifications to cover the Agricultural graduates. This was not acceptable. An assessment of the Canadian situation relative to the American model showed that in Canada the Agrologist Institutes and the Associations of Professional Engineers dealt with the professional and sociological aspects of the different members qualifications. It was agreed that the society should therefore be primarily concerned with the technology of Agricultural Engineering, and accordingly be named the Canadian Society of Agricultural Engineering.

Glenn Downing was appointed chairman of a nominating committee of the proposed society, and instructed to obtain a slate of officers. At the 1958 Annual Agricultural Engineering Section Meeting, held at Acadia University, Wolfville, Nova Scotia, June 23-26, the Canadian Society of Agricultural Engineering was formally organized. The elected officers for 1958-59 were:

President	-	J.E. Beamish
President-Elect	-	R.P. Frey
Secretary/Treasurer	-	H.D. Ayers
Directors	-	J.A. Roberts
		C.L. Montgrain
		R.F. Ford
		G.N. Denike
		B.T. Stephanson



J.S. Parker, in reporting to the A.I.C. Business Meeting in Wolfville, stated that the members had approved a Constitution and By-Laws for the newly formed C.S.A.E. and that the new Society had requested affiliation with the A.I.C. Following this announcement, the delegates to the Annual A.I.C. Business Meeting voted unanimously to admit the C.S.A.E. as the first affiliated Society to the A.I.C., establishing a precedent which was soon followed by a number of the A.I.C. sections. The Agricultural Engineering Section of the A.I.C. was dissolved. It had a bank balance of \$19.80. T.L. Coulthard had a gavel made for the new Society of half Eastern and half Western wood with a maple handle. This was presented by John S. Parker, the last Chairman of the A.E. Section-A.I.C. to J.E. Beamish, the Founding President of the C.S.A.E., who presided at its first meeting on June 24, 1958, at Acadia University, Wolfville, N.S.

The first major activity to be undertaken was the development of a journal. C.G.E. Downing was appointed as Editor. In formulating an editorial policy, it was agreed that the journal must be of a standard that would be acceptable as a reference journal and have wide distribution amongst libraries. It was decided to cover the cost of publication through membership fees and not to solicit advertising. It must also be published at least once a year to ensure continuity. The first volume was published in 1959. By the third volume, a grant of \$3000.00 was obtained from the National Research Council for publication purposes. This made it possible to hold down fees and to maintain the status of no advertising.

#### Acknowledgement

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Jacob (Jack) Pos  
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