

CANADIAN AGRICULTURAL ENGINEERING

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CAN WE COUNT ON YOUR HELP?

Garland E. Laliberte

Charter Member and President, CSAE

There are some interesting trends in the numbers of agricultural engineering degrees being awarded in Canada of which many members may not be aware. According to the CSAE Education Committee, there were 45 bachelor's degrees awarded in agricultural engineering in 1975. Three years later, however, 124 undergraduate degrees had been awarded by the time of the Committee's survey in June. Making conservative projections, it is quite probable that when the gowns are all put away after the 1978 fall convocations, the number of bachelor's degree graduates will have tripled all in the short period of three years.

What sort of a phenomenon is this? Is the increase a little blip on the chart of time or is it a sign of a trend which could change the image of agricultural engineering in Canada? Judging by the comments of my colleagues who are Chairmen of Agricultural Engineering Departments at Canadian universities it may be a harbinger of a new era for agricultural engineering. At the 1978 Annual Meeting of the CSAE, we heard of increasing enrolments at almost all institutions. At Laval University, for example, the 86 undergraduate students currently enrolled in the four-year agricultural engineering program there represent almost as many as have graduated from it during the entire 14-year history of that University's bachelor's degree program. The introduction of new programs in water resource engineering and biological engineering at the University of Guelph has expanded the opportunities for engineering students there and has contributed to a swelling of the ranks. For the past three years the intake into the common first year at Guelph has averaged over 100. These larger numbers will be receiving their parchments in a year or two. The picture at other institutions, while not so dramatic in all cases, is consistent with the general trend.

I do not claim to know the reasons for this new development but I have observed that it has a parallel, perhaps not so spectacular but unmistakably evident, in many of the other agriculturally related disciplines. I think it is not unrelated to the generally more favorable image of agriculture in North America and to the back-to-the-land migration of many former urban dwellers. For many this migration is a new adventure into the unknown but for others it is a re-establishment of roots which have been temporarily transplanted for a decade or two in the urban environment. In any case, the stemming of the tide and even the reverse of the flow is a sign of a new prestige accorded to rural living and to things agricultural.

Are we ready for it in agricultural engineering? With these larger numbers of agricultural engineering students, are we taking every opportunity to make sure they feel welcome and comfortable in their new discipline? Are we making certain they are aware of what the CSAE has to offer agricultural engineers? Could we challenge them to work with us with a view of making the CSAE even more interesting to new agricultural engineering graduates? Could we offer to spend a day, or even a half day with a student or with a group of students showing them our workplace? Are those of us at Canadian universities making this new development abundantly clear to the senior administration and to the governing bodies at our institutions and are we making them aware that most of our graduates are finding jobs with little effort? Are we making certain that society appreciates that the difficulty in finding employment being experienced by graduates from many of the disciplines in pure science and in the humanities and the social sciences is not being felt by agricultural engineering graduates? We have a story to tell and because of our relatively small numbers the challenge is even greater for each of us.

Can we count on your help?

Canadian Agricultural Engineering publishes papers covering the general field of Agricultural Engineering that fit into one of the following classifications: 1) a scientific paper based on original research; 2) a technical paper based on design, development, testing, or analysis of machines, equipment, structures, processes, or practice; 3) a general paper on education relative to curricula and philosophy or trends in science, on a survey or investigation of some phase of research or research methods, or on extension or extension methods. The Editorial Board may also publish abstracts of papers published elsewhere and interesting news items from members of Agricultural Engineering.

Manuscripts for publication should be submitted to the Chairman of the Editorial Board. The papers must be original and must not have been published elsewhere or copyrighted. The author, not the CSAE, is responsible for opinions expressed. Information published in *Canadian Agricultural Engineering* may be quoted in whole or in part provided that credit is given to the author and to the journal. Information on page, reprint, and other charges may be obtained from members of the Board.

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NEWS HIGHLIGHTS

DON GUNN EMBARKS ON NEW CAREER

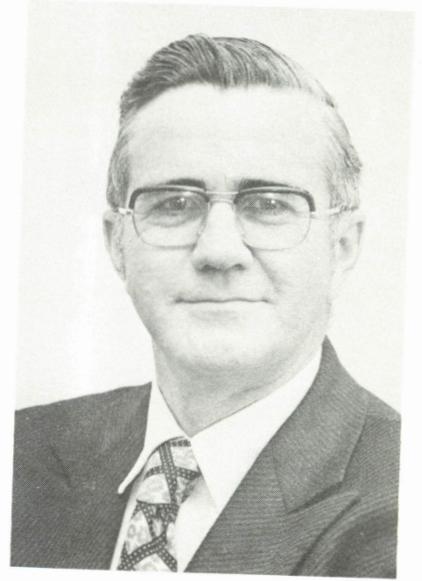
J.D. (Don) Gunn, Supervisor of Agricultural Engineering in the Extension Services Branch of the Nova Scotia Department of Agriculture and Marketing, resigned from his position 1 June 1978 in order to be part of a farming business with his sons, Donald and David, at Scotsburn, Pictou County, N.S.

Mr. Gunn was born in Scotsburn, Pictou County and was educated in the Cross Roads public school in that village and at New Glasgow High School. Following graduation from high school, he enlisted in the Canadian Army and received engineering training through an army university course. Following the war, Mr. Gunn enrolled at the Nova Scotia Agricultural College from which he graduated in 1947.

Mr. Gunn began his work with the Department as an Assistant Agricultural Representative in Guysboro County during the summer of 1947. Following graduation from MacDonald College in 1949, Mr. Gunn was appointed Assistant Agricultural Representative in Pictou County and in 1953 was transferred to the same position in Annapolis County. In 1954, Mr. Gunn was transferred to the Agricultural Engineering Division at Truro. In March of 1966, Mr. Gunn was appointed to his latter position as Supervisor of Agricultural Engineering.

Mr. Gunn was active in the promotion and development of the Canadian Farm Building Service and was well-known to his co-workers across Canada.

Producers from the Province of Nova Scotia appreciated Mr. Gunn's long and dedicated service in the field of agricultural engineering. They are pleased Don Gunn is returning to the home farm through which he will continue to make a positive input into the agricultural industry in Nova Scotia.



NOTES TO CONTRIBUTORS

The Editorial Board will assess suitability and essential detail of papers submitted for publication in *Canadian Agricultural Engineering*. One or more reviewers will be used. Their comments and suggestions will be compiled and submitted to the author. The review will ensure that:

1. A research paper does represent a piece of research carried to a well-defined stage of advancement and that the conclusions are adequately supported by the experimental results.
2. A technical paper represents a clear, concise, and factual outline and interpretation of the development, design, test, or analysis under consideration and that it is a contribution in the field of agricultural engineering.
3. A general paper on education, research, or extension is pertinent to major changes in curriculum, research, or extension or to forward-looking developments in these areas.
4. A technical note, of one journal page or less, on equipment development, technique of measurement, or method of analysis will have application for other workers in the field of agricultural engineering.

MANUSCRIPT

The manuscript should be typed double-spaced on paper 8-1/2 x 11 inches (21.6 x 27.9 cm) with margins not less than 1-1/4 inches (3.3 cm). The first page should contain only the title, authors' names, addresses (including postal codes), and contribution number where applicable. Tables and captions for illustrations should be on separate pages, placed after the text. Manuscript paper with numbered lines is preferred. The original and two copies are required.

The title of the paper should be capitalized and centered on the page; it should give an accurate description of the article, using key words that can be used for computer-indexing.

ORGANIZATION

The paper should be organized to conform with present Journal practice.

Research and technical papers must include a short abstract section of about 200 words.

Major headings — Center on the page with all words in capital letters.

Subheadings — Start at left-hand margin, capitalize first letter of major words.

Sub-subheadings — Start at left-hand margin, in lower case except first letter of first word, and underline.

Technical and detailed information should be included only in the form of description, table, graph, chart, or photograph. In general, follow the *Council of Biological Editors Style Manual*, 3rd ed., published by the American Institute of Biological Sciences, 1401 Wilson Boulevard, Arlington, Va. 22209.

References

List references alphabetically by authors at the end. Include year of publication, title in lower case except first letter of first word, and source, with volume and page numbers where applicable. Names of periodicals should be abbreviated in the form given in *BIOSIS List of Serials with Title Abbreviations* (Bioscience Information for Service of Biological Abstracts, 211 Arch Street, Philadelphia, Pa. 19102). Material in press, with the name of the journal, may be used as a reference. Private communications and unpublished reports should be referred to in parentheses in the text. Avoid the use of footnotes where possible. Use the author-date system in the manuscript when referring to articles in the Reference section.

Tables

Designate tables at the top by table number (Roman numerals) and title, all in capital letters. All headings and other information in tables are to be in lower case except first letter of first word. Keep the table compact and place it across the page wherever possible. Do not use vertical lines.

Measurements

Use the metric system (SI) in the text. Tables, charts and graphs should be given only in metric units.

Equations

Equations and formulas must be set up

clearly. Use capitals for symbols as much as possible and lower case for superscripts and subscripts. Greek and other characters should be identified clearly. Equations should be numbered on the right-hand margin in large numbers and in line with the center of the equation.

Abbreviations

For commonly used terms, consult the *CBE Style Manual*. Abbreviate units of measure only when used with numerals. Do not use abbreviations in the title. Normally, numbers less than 10 should be spelled out, e.g. six.

Paragraphs

If paragraphs are to be numbered, designate by arabic numerals. Designate sub-paragraphs by lower case letters in parentheses.

ILLUSTRATIONS

An illustration or a group of them should be planned to fit, after reduction, into a space equal in width to that occupied on the journal page by one column (preferred) or two or three columns if necessary. The original should not be more than three times the size of the final reproduction. For identification, the figure number, author's name, and paper title should be written lightly in the lower left corner of the photograph. Use a soft lead pencil. Photographs should be printed on glossy paper with strong contrasts approximately 5 x 7 inches (12.7 x 17.8 cm) in size. One set is required for each copy of the paper.

Line drawings

Make line drawings in india ink on plain or blue-lined paper or other suitable material. Letters, numerals, labels and axis captions should be made in capital size with a lettering guide (*not a typewriter*). They should be large enough that the smallest character will not be less than 1 mm high when reduced. Type the figure numbers and captions on a separate page. One set of clear copies is required with each copy of the paper. The original drawings must be provided when the paper is accepted for printing.