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Note:

Papers included with the exception of those marked with an * were presented at the Agricultural Engineering Section session of the annual meeting of the A.I.C. in Wolfville, Nova Scotia, in June, 1958.
* Papers were prepared expressly for publication in the Journal.

A NEW SOCIETY

by **J. E. Beamish**, Member C.A.Eng.S.

A new publication should create some curiosity as to its purpose and what it represents. While an examination of the contents may result in an interest in the material contained, an expression of the background and intentions which prompted the publication will serve as an introduction and a reason for its origin.

Canadian Agricultural Engineering is the official publication of the Society of the same name which was formed in June 1958. This Society represents people from across Canada who have a mutual interest in the relationship of engineering and agriculture. Both professional engineers and agrologists are brought together through the Society, thus illustrating the inter-relation of two fields of science which were at one time considered to be widely separated. To establish the reason for this convergence of interest requires a review of the circumstances of modern agricultural practice.

Canadian agriculture is rapidly changing from a way of living to a competitive industry backed by science and technology. Canadian agricultural products must compete on the domestic and export markets with similar products from countries where subsidies sustain the producer or where the standard of living of farmers is much lower than we intend to have in Canada. It would appear that the ability of the Canadian agricultural producer to retain an acceptable place in world commerce is dependent on the degree of efficiency which can be reached and maintained at all stages of production.

Agricultural production is no longer a simple process of the farmer repeating the traditional seedtime and harvest operations. Research is constantly providing new varieties of crops which better suit each condition, new chemicals to combat diseases and pests, better fertilizers, improved soil treatments and new methods of using power to replace labour. To produce a good crop requires the skillful application of all the current knowledge available about the crop and the circumstances under which it is grown. The harvest which was the culmination of the production cycle is now for many crops only the start of another series of processes to provide a product which will be acceptable to the ultimate consumer.

Modern agricultural practice incorporates the advances of many sciences whose effective application requires the inclusion of numerous engineering techniques. These techniques provide aids to research, develop machines for efficient farming, establish methods for processing products to consumer standards and assist in developing new agricultural lands while conserving areas which might otherwise be lost to agriculture. The prime purpose of the Canadian Agricultural Engineering Society is to encourage its members in the application of these engineering techniques to all phases of agriculture.

The rapid and extensive changes taking place in agricultural production are not significantly appreciated by many people and consequently the advantages of close co-ordination with the engineering sciences are often overlooked. Engineering techniques simplify otherwise tedious research procedures, they enable machinery being designed to meet scientific requirements rather than merely to reduce labour and speed up operations, and they illustrate ways of producing functional buildings which are stronger, less costly and better adapted to specific uses. Engineering principles applied to land development operations, irrigation development and land drainage have made otherwise costly undertakings economically feasible. To make these facilities of engineering better known to agriculture, industry and business is a second objective of the Society.

Our whole concept of modern progress is based on education. An agricultural engineer must be one who has an appreciation of the natural sciences relating to agriculture as well as the physical sciences associated with engineering. He must also have an interest in people and their welfare if his work is to be conducted in reasonable perspective. Agricultural engineering education must therefore be something more than fundamental training in the sciences but should be related to the needs of business, industry and agriculture. The encouragement of this calibre of education is our third objective.

This first issue of Canadian Agricultural Engineering, like the Society it represents, is new and undeveloped. Each year hence will provide more and better material of both technical and scientific value. The service of agricultural engineering to Canada will increase as people become better acquainted with, and better informed on, the various contributions that engineering can make to the many phases of agriculture. The activities of the Society and the publication of this journal will be directed toward that service.

CORRECTIONS

MacQueen, DOSIMETRY AND RADIATION FACILITIES, P. 6

P. 6 Column 1, - Line 12 should be deleted.

P. 8 Column 1, - Illustration at bottom of page should be inverted.

Hedlin, FRICTION AND SHOCK LOSSES IN SOME AIR-CONVEYING SYSTEMS USED IN AGRICULTURAL APPLICATIONS, P. 15

Eq. 2 should read $\left(\frac{V_1 - V_2}{4005}\right)^2$

Fig. 3 "Head loss, in inches of water, is equal to $\left(\frac{V_1}{4005}\right)^2$"-should be deleted.

Eq. 5 - delete "p"

Eq. 6 - The expression following Eq. 6 should read:

$$F = \frac{1}{m + 1} + \frac{1}{2N} + \frac{m - 1}{6N^2}$$

Eq. 8 should read

$$X_b = \frac{HT}{V.P.b}$$

P. 16, Column 3, Line 11 - "ration" should read "ratio"

P. 16, Column 3, Line 20 should read

--"duct velocity ratios above 0.4. The loss X_b for a takeoff to------"

The angle theta in Fig. 5 is the same as inverted e used in the text.

P. 17 Reference 2 - Kramer instead of Framer
" 8 - Tuve instead of Tauve
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