

# AGRICULTURAL

The 19th Report of the Ontario Agricultural College.

## MEATY MATTER FOR FARMERS.

A Year in Which All the Rooms of the College Were Occupied—The Students, Their Numbers and Various Classification Thereof—The Experimental Work Done in 1893—The Dairy Work—Plans for the Future.

Full of information of especial value to farmers, the 19th annual report of the Ontario Agricultural College and Experimental Farm at Guelph, laid before the House on Feb. 27, is particularly interesting at this time when public attention is more than ever before directed to the profession of agriculture, as Lord Aberdeen styles it. This is not an unreasonable attitude of the people when it is remembered that farming—the pursuit of agriculture in all its branches—is the main industry in Ontario; and that whatever improves the condition of farmers, and makes them more successful workers, benefits all classes. These are facts which no one will question. This nineteenth milestone on the road of agricultural education, as it is known in Ontario, is remarkable as indicating the most successful year in point of attendance at the college and progress in the development of the academic ideas, as applied to such a practical calling, of its history. President Mills puts first the points of progress as follows:—The completion of our greenhouses, the construction of a large farm piggery, the erection of a dairy building and two dairy cottages, the appointment of a lecturer on horticulture, the organization of a summer school for teachers, and the commencement of a home dairy course for farmers' sons and daughters.

Next he tells of the satisfactory attendance: "We began the year," he says, "with all rooms occupied; and in October last we had applicants for every vacancy. The total number on the roll in 1893 was as follows:—Regular students, 156; dairy students, 60; total, 246. To these may be added an attendance of 34 at our summer school in July last, making a grand total of 280.

Since 1890 the attendance from Ontario has increased from 107 that year to 207 in '93. Students from outside the province during that period, while the Hon. John Dryden has been the Minister of Agriculture, have ranged from 9 to 16 in number from the other provinces; 13 to 18 from the British Isles, only one each year from the United States, and from 3 to 5 from other places.

The students in the general course are classified as third year, 23; second year, 53; first year, 110; dairy students, 60; Total, 246.

Each county in the Province is allowed to send one student free of tuition. The

cently built, we have room for two or three other breeds, and we may possibly try the Chester Whites and Poland Chinas this year.

Experimental work has been carried on with vigor throughout the year, especially in testing varieties of grain, dates of seeding, and methods of cultivation.

On the plots at the College, Mr. C. A. Zavitz, experimentalist, tested 70 varieties of winter wheat, 73 of spring wheat, 73 of barley, 139 of oats, 81 of peas, 3 of buckwheat, 137 of potatoes, 54 of Swede turnips, 37 of fall turnips, 49 of mangels, 10 of sugar beets, 33 of carrots, 93 of fodder corn, 10 of millet, 2 of sunflower, 13 of rape, 18 of clover, and 40 of grasses. He also tried different dates of seeding on 16 plots, mixtures of grain on 107 plots, application of different fertilizers on 30 plots, different methods of cultivating fodder corn, potatoes, and roots on 150 plots, methods of preparing potatoes for planting on 20 plots, and miscellaneous experiments on 161 plots.

To this may be added some live stock experiments, conducted under the supervision



HON. JOHN DRYDEN.

of Mr. Zavitz, as follows: With steers, 2 experiments, 6 animals; with cows, 1 experiment, 4 animals; with lambs, 3 experiments, 160 animals.

One of the most strikingly significant statements made in the report is that regarding the rapid increase of interest taken by farmers throughout Ontario in the experimental work of the college. This is co-operative, conducted by ex-students of the college and other interested farmers, under the control and supervision of a committee appointed annually by the Ontario Agricultural and Experimental Union. So splendid a success has been achieved along these lines that in the four classes of experiments into which this very valuable work is divided, that pertaining to fertilizers, fodder, and grain crops, the number of plots used for these tests by farmers all over Ontario has risen from 3,643 in 1891 to 5,683 in 1892, while in 1893 7,181 plots were used by 1,204 experimenters.

The Dairy Department has kept pace with the rapid growth of interest and enterprise in dairy matters throughout the Province, especially in the matter of dairy instruction—in the Dairy School at the College, and by means of the Traveling Dairies throughout the Province.

President Mills says: "Our dairy school last winter was in every sense a marked success, and the applications for admission being so many more than we could accept, we decided that we should make an effort to increase our accommodation. The Minister of Agriculture, promptly taking in the situation, authorized the necessary expenditure, and we went to work—completed our dairy stables, enlarged our cheese-curing room, put in a new engine, built a dairy wagon shed and two dairy cottages, and let the contract for a large dairy building for milk-testing and butter-making on the factory plan. The result is that we now possess one of the most complete dairy establishments to be found anywhere on this continent. We have commodious dairy stables, with a circular silo attached and a wagon shed close by, an annex containing a cream separator run by tread power, a dairy piggery, and dairy cottages for our head dairyman and dairy cattleman; also apartments for a home dairy course, and a cheese-room, butter-making, separator room, and laboratory for work on the factory plan; likewise a large lecture-room, a live stock class-room, and a general business office, with cloak, sitting and bath-rooms for both ladies and gentlemen—all heated by steam and well ventilated.

"For those who do not want, or cannot take, the factory course, we have provided a short Home Dairy Course. This is intended especially for farmers and their sons and daughters who may wish to learn something about the latest methods and appliances used in private dairies; the best methods of setting milk and handling cream; the important points in churning; the salting, working, printing, packing, and marketing of butter; the use of the Babcock milk-tester, and the running of cream separators by hand, tread power, and steam.

"No entrance examination is required for the dairy school. Tuition is free to residents of the Province of Ontario; to others \$5 for the course.

"Ladies are invited to take this course—the full course, a portion of it, or the Home Dairy Course. The latter is especially intended for them. Five ladies took the course last year, three of whom passed all the prescribed examinations and received certificates. Two of them came out near the head of the list.

"The traveling dairies continued their work during the year. They started out on the 1st May and returned on the 28th November. One of them was in charge of W. V. Carlyle, B.S.A., with John McTavish as his butter-maker; the other was represented by G. E. Day, B.S.A., till the early part of September, after which date the work was done by H. L. Beckett, B.S.A., with Jas. Hume as his butter-maker.

"The counties and territories in which the dairies worked during the season are the following: Lambton, Huron, Bruce, Grey, Dufferin, Simcoe, Ontario, Durham, Peterborough, Victoria, Muskoka, Parry Sound and Algoma. A considerable amount of time was spent in the northern territories, including Manitoulin and St. Joseph Islands.

"The whole of Ontario has now been covered, excepting Halton, and parts of Peel and York. These counties are, of course, entitled to the same consideration as the portions of the Province, and some districts are asking for a second visit. Hence I would recommend that one of these dairies be kept at work for another year, at least."

Writing of the short summer course in agriculture for public school teachers he says: "The great majority of the people of this Province are dependent on our public schools for the whole of their secular education. The primary aim of public school teachers should undoubtedly be to teach well the elements of a general English education, but at the same time, we maintain that in this Province at least, there is also another duty, which, though secondary, is by no means unimportant, viz., to consider the occupation which

most of the children will follow on leaving school, and, as far as possible, give them instruction, not only in the elements of a general education, but also in some of the principles that underlie successful practice in the industry by means of which they will have to earn a livelihood for themselves and those depending upon them. Some of our best educators and wisest statesmen are of opinion that the teachers in the public schools of this Province should, incidentally or otherwise, give some instruction in agriculture and one or two of the sciences related thereto; should impart as much reliable information as possible about agricultural pursuits; and do all in their power to inspire their pupils with a love for the simplicity, independence, and healthfulness of farm life. Realizing the importance of this work and believing that valuable instruction in agriculture may be given by simple lectures to children—conversations on soils, plants and animals—so simple that even the lower classes in the public school may understand, so attractive as to interest the youngest scholars, and of such a character as to benefit all kinds of pupils, whatever their occupation in after life—the Hon. John Dryden, Minister of Agriculture, with the hearty co-operation of the Minister of Education, instructed our staff at the Ontario Agricultural College to offer, to the teachers of Ontario, a short summer course of instruction in agriculture and the sciences most closely related thereto.

In response to circulars, setting forth these views, sent to the public school teachers of Ontario fifty applications were received, and 34 came of whom 17 were ladies. No tuition fee was charged. Rooms and board for the four weeks during July of the course was provided in the college for \$12. The teachers were very much pleased with the course. They found the professors courteous and attentive, their surroundings at the college pleasant, and the lectures eminently practical and suggestive. No examination was required, and as a consequence the work was entered into as a kind of recreation.

The work of the Farmers' Institutes has greatly increased within the last few years. The first regular institute meetings in Ontario were held in the winter of 1885. In January of that year, we (the professors of the college) assisted in holding twenty-six meetings. From that time to the present there has been a gradual development in the work and usefulness of these important organizations.

Last year, the members of the staff, with the help of a few of our leading farmers, fruit-growers, dairymen, and apiarists, assisted at 119 meetings in the first three weeks of the month of January. In the early part of February, an extra department, consisting of John Hannah, Searth; D. Z. Gibson, B.S.A., of Haldimand County; and Samuel Howard, of Gorrille, held a number of meetings throughout Muskoka, Parry Sound, and Algoma.

On the 6th January, the late Governor-General, Lord Stanley of Preston, was with us; and on the 8th April (a very stormy day) the Hon. the Minister of Agriculture, Mr. J. A. Macdonald, was a visit. About 12,000 farmers were here in the month of June, and a large number of foreign visitors during the summer and autumn—farmers' delegates from Great Britain, and prominent men from Denmark, Smyrna, Antioch, Beyrout, Bombay, and other places throughout Europe and Asia.

The financial statement is one evidencing economy and shows expenditures for college maintenance of:

Salaries, wages, &c.	\$15,328 38
Summer course for teachers	500 00
Food	8,154 63
Household and repairs	2,278 73
Advertising, printing, postage	2,278 73
Stationery	1,186 94
Miscellaneous and repairs	1,867 07
Maintenance and repairs of buildings	1,256 39
ings	2,256 39
	\$30,505 61

The revenue account amounts to \$7,269-11, the two principal items being tuition fees, \$1,949, and board, \$5,141.66, leaving an unexpended balance of \$2,395.50 from the appropriation of \$81,632 by the Legislature.

The total expenditures for the maintenance in all departments in 1893 are:

College	\$20,238 50
Farm proper	5,918 91
Experiments	5,330 17
Experimental and traveling dairies and dairy school	9,903 89
Garden, lawn, etc.	3,931 62
Mechanical department	1,753 90
	\$55,574 24

Total of unexpended balances on the year's operations in all departments, \$8,418.

The amount paid by the college to students for labor in the outside departments was \$3,788.80. This was done by crediting on board bills the sums allowed to students from week to week by the foreman under whom they worked.

The farm furnished feed and bedding for the college horses, put in ice for college and dairy, supplied the college with milk, potatoes, turnips, etc., and provided the hay, straw, pasture, and ensilage used by the dairy department.

In conclusion President Mills says, "That never before were we so well equipped for work in the different departments of the institution as at the present time. We have nearly all the buildings we require, and our class room and laboratory appliances are sufficient for the number of students now in attendance. It may, before long, be necessary for us to increase our dormitory accommodation; and we shall have to provide a new building for the experimental department."

The report is an indexed volume of 303 pages containing in addition to the president's report from which this notice is prepared, reports of the different professors in the college and of the farm superintendent and experimentalist besides seven appendices bristling with bright matter, extremely useful to practical farmers. Handsome photographs of the college buildings and views of the farm and of the beautiful college trophy at the World's Fair in Chicago embellish this notable blue book. Every agriculturalist in Ontario ought to get a copy.

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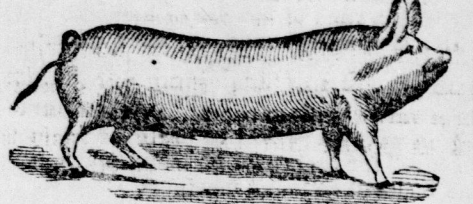
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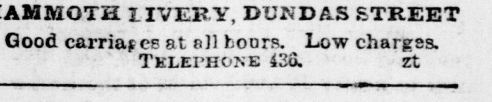


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