

The Ontario Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep, and Swine Breeders' Association, and of the Farmers' Institute System of the Province of Ontario.

NOTES ON THE AGRICULTURAL COLLEGE, GUELPH.

The interest of the farming community in the college at Guelph seems to grow from year to year. Over 30,000 people, from different parts of the province, visited the college in the month of June. These visitors went on excursions run by Farmers' Institutes, and the great majority of them were outspoken in their praise of the treatment which they received, and of the work done at the college. And the peculiar thing about these excursions is that the same people go from year to year and always seem well pleased with their visit—always learn something, and return better fitted for work and life on the farm.

STUDENTS IN ATTENDANCE.

There is no doubt that of late years there has been a marked increase of confidence in the work of the college. The attendance of students in 1897-98 was considerably larger than at any time in the past. Every room was occupied, and about thirty had to lodge outside during part of the year and the character of the students has improved. The great majority of those now in attendance are farmers' sons of the best type.

THE FARM.

The farm proper is in a much better condition than it was in days gone by. It is no longer necessary to refer students to the United States, Great Britain or Germany for object lessons illustrative of what is taught in the class-room. They have all they need right there on their own farms. The farm has at length become a source of strength to the college.

THE EXPERIMENTAL DEPARTMENT.

This department has grown and developed till it has become one of the most extensive and useful stations on the continent, especially in the line of field experiments. The results of the work of this department, published from year to year in the annual reports of the college, are of inestimable value to the farmers of Ontario. It is a matter of great importance to farmers to know which are the best varieties of grain to sow, and to have the latest and most reliable information as to the selection of seed, dates of seeding, methods of cultivation, mixtures of clovers and grasses, the growing of green fudders, the feeding of animals, and other matters which bear directly upon their work throughout the year.

And the co-operative tests, made at over 2,000 different places throughout the province, chiefly by the students and ex-students of the college, under the direction of the college experimentalist, check the results obtained at the college, and add greatly to the value of the work done by the institution.

THE DAIRY SCHOOL.

The Dairy School in connection with the college opens on the 4th of Jan-

uary, and continues its work for twelve weeks. Last session there were 110 students in this special three months' course, most of them now employed in the cheese and butter factories of Ontario. During the remaining nine months of the year two men of the department devote their time to experimental work—one in cheese and the other in butter endeavoring to solve problems which arise in the factories and creameries of the province; and one point especially should be noticed, that is, that any man or woman, boy or girl, can go at any time of the year to the *Home Dairy Department* and receive instruction in butter-making free of charge—no examination to pass, no fee to pay. They have simply to go and stay as long as they wish—three days, a week, or a longer period. What more liberal terms could be offered to those who wish to increase their knowledge of this important branch of agriculture?

THE HORTICULTURAL DEPARTMENT.

In the Horticultural Department there is much to interest farmers, fruit growers, market gardeners, and florists—five or six greenhouses furnishing plants and flowers for lectures and practical work in botany and horticulture, a good-sized orchard, a considerable plantation of small fruits, a large vegetable garden, a beautifully arranged arboretum, and several very interesting clumps of forest trees; and a considerable amount of experimental work is being done in the department, especially in testing varieties of fruit, flowers, and trees.

BACTERIOLOGY.

Under this head the college is instructing its students in the life history and characteristics of some of the innumerable foes of man and beast known by the general name of *bacteria*; it is likewise investigating the question of foul brood in bees, and manufacturing tuberculin, or the substance which is used to test animals for *tuberculosis*. This substance is sent free to farmers to test their own cattle; and to others who want it at ten cents per dose. It is given to farmers without charge on condition that they report the results of their tests confidentially to the college bacteriologist for the private information of the department.

POULTRY.

In the poultry department, also, we find much to interest farmers—a complete set of houses with suitable yards, coops, drinking fountains, etc., twenty-five odd varieties of hens, of fifteen or sixteen breeds; and four or five hundred chickens, which will be in good shape for sale in October or November.

Add to all this the special college equipment, not only the ordinary school-room appliances, but well-equipped laboratories for practical work in chemistry, physics, biology, bacteriology, horticulture, etc., and we have no ordinary institution.

The general verdict is that the college is a credit to the province and is doing excellent work, directly for the farming community and indirectly for other classes.

A DAIRY EDUCATION.

By H. H. DRYDEN, Professor of Dairy Husbandry, O.A.C., Guelph, Ont.

"Just experience proves, in every soil,
That those who think will govern those who toil."

The world to-day needs *thinkers* as well as workers. Some are content to work, and allow others to do the thinking for them. Some think, and compel others to do the work. In Canada we need those who combine thinking and working. The dairy industry, especially, needs such persons. He or she who deals with animal life and animal products needs a more liberal education and more skill than the person who deals with vegetable life and products. The lower form of life is utilized to sustain the higher. The dairy cow is a highly organized form of animal life. She is also a form of artificial animal life, made so by man, and, in consequence, needs a superior person to attend her and supply her wants. Natural conditions are no longer consistent with her acquired habits. The cowherd who exposes his charge to snow, sleet, and cold rain, hot sun, flies, scanty food, or gives her cruel treatment, fails in the essentials of successful treatment of the dairy cow.

In the handling of cow products great strides have been made in recent years. The selling of milk in "six penny" or "shilling" crocks has been superseded by the modern creamer, and this again by the cream separator. Each step in advance requires more skill and forethought, but if these are lacking the modern methods become a hindrance rather than a help to the dairyman.

The markets of the world are more exacting each year. None but goods of the finest quality will pay for exporting, and the home markets are each year more critical. More intelligent and more skilful makers of dairy goods are asked for now than formerly. In addition to being able to make good butter and cheese, men who manage factories are supposed to be able to make out invoices of goods shipped, to keep accounts, to figure fat due patrons from weight of milk and test, to test milk, cream, etc., with the various testers, and above all to keep things in and around the factory in the most cleanly and orderly condition.

The farm dairy also requires a certain amount of attention. We all trust that the creamery system of butter-making will soon become as general as the cheese factory system, but for some time to come there will be considerable butter made in private dairies. These home dairy products should be of the finest quality, especially for the farmer's table. Good butter supplies the oil which makes the family carriage run smoothly, while bad butter clogs the wheels, causing

family jolts and jars. As a lubricator of the brain nothing equals fine cream and butter. As a muscle builder, what is equal to good ripe cheddar cheese?

The more brain power put into the manufacture of good butter and cheese the more brain power will be produced in the world. The more milk, cheese and butter consumed by all classes the more energy and muscle will there be to expend upon the world's progress. For the production of energy to do work, nothing equals the products of the dairy for economy.

In order that readers may have the information most generally asked for in reference to the dairy school in connection with the Ontario Agricultural College, where a dairy education is given to all who attend and apply themselves, a few of the more commonly asked questions are appended, together with their answers.

Q. When does the next course open?

A. Jan. 4th, 1899, and it will continue twelve weeks.

Q. What does it cost to take a full dairy course?

A. Your railway fare to and from Guelph. Board at \$2.50 to \$3 per week; two suits of white clothes, \$2.50; laundry, \$2; incidental expenses, \$5. Total, \$40 to \$50, not including railway fare.

Q. What books are required?

A. A note book for taking down lectures and discussions. The dairy library contains all the latest works on dairying, and the books are for the free use of students. In addition, all the leading agricultural and dairy journals are kept in the reading-room. A few of the best works on dairying should be purchased by students who wish to be especially well up in the business.

Q. What benefit will it be to take a dairy course?

A. If you are a cheesemaker, you will pick up many useful hints on your work, as the instructors are the best practical men available. The instruction in milk-testing is very helpful, while a knowledge of buttermaking is an essential part of a cheesemaker's training in these days of winter creameries in cheese factories. If you are a buttermaker, you will receive instruction in the running of the leading cream separators, pasteurization of milk and cream, making starters, ripening cream, churning and preparing butter for export and local markets. If you are making butter in the home dairy, you will receive lessons in setting and skimming milk, operating hand cream-separators, churning and printing butter. A week or more could be profitably spent by many farmers' wives and daughters. A lady instructor gives special attention to ladies. The lectures on poultry are valuable to the home dairy student. If you are simply going to farm, and never expect to make any cheese or butter yourself, the course will broaden your views. The lectures on feeding, breeds of cattle, swine, and poultry