

grass land; that made in the summer is piled and used when desired. Eight binders are employed to cut the harvest, each drawn by three horses; for other work, eight four-horse teams are employed. The working hours on this farm are reasonable and in line with the most progressive methods. Breakfast is at 6 a. m., the men and teams leaving for the field at 6.30 a. m. Dinner is called at noon, one hour being allowed for the meal and siesta. Supper is at 6 p. m.; in harvest time at 6.30 p. m. A businesslike method is followed in the hiring of the men, more especially with a view to prevent them leaving in harvest and threshing time, when they might be allured by higher wages. Each man signs a contract for the summer period (7 or 8 months) at \$20 per month, \$5 additional per month being paid to those who complete their term of service. During the winter \$25 per month is paid, the men to board themselves. At the time of our visit 10 men were employed, and who boarded at the boarding-house. In addition to the herd of pure-breds, sheep-feeding is practised to a considerable extent during the winter, the screenings from the farm elevator being profitably utilized in this manner, with the addition of hay. Native hay is preferred to timothy for the sheep. Last winter 240 sheep were fed at a profit on the farm, self-feeders being used for the screenings. The esthetic side is not at all forgotten, several large tree plantations being seen on the farm. It is the intention this season to plant 10 acres with 500 birches and some 2,500 elms. Water is abundant on the farm, got from a deep and seemingly inexhaustible well, as also from a convenient coulee. This farm is a valuable object-lesson of the possibilities in the combination of cattle-breeding, grass-growing and wheat-raising.

### The Ontario Experimental Farm.

June is always a busy month at the O. A. College Farm. On the 21st inst., some 2,000 excursionists, hailing from Bruce and Dufferin, visited the institution. This is above the average day's visitors, but on the 15th this number was exceeded by 500 people. On other days during the month the numbers ran from 800 to 1,800, so that the month's visitors reached probably 25,000 people, including many heads of farms and families and their sons and daughters. On the 21st inst. a member of our staff spent the day on the Farm. Most of the officers and many attendants were in their departments, devoting their time to answering questions and imparting information. The huge undertaking of feeding the multitude was quickly accomplished, and without confusion, in the gymnasium building, where some 800 could sit down at once on benches running lengthwise of the hall. When all the seats were filled, President Mills called for 34 young men from amongst the excursionists to act as waiters. The lunch, composed of warm tea, ham sandwiches, soda biscuits, buns, and cheese, proved acceptable, substantial, and was much relished. At the close of the lunch, Dr. Mills devoted a few minutes to giving information and advice as how to best employ the afternoon, informing the visitors where to go for special information *re* weeds, insects, etc. Referring to the prevalence of weeds, he estimated that very many farms had depreciated quite \$15 per acre because of weed infestation. To get rid of them, the advice was to throw off your coat and go at them. It is well to become informed as to the nature and habits of the particular weeds we wish to destroy, but while many are spending time studying the best ways to eradicate them, the weeds are growing and getting farther and farther ahead. "Go at them," said Dr. Mills "and do not relax effort until they are destroyed." Even the best land cannot grow two crops profitably at once. Dr. Mills waded into those farmers who will not spend a cent to give their sons who are to remain on the farm an education, while they spend lavishly on the boys who are leaving the farm to enter the professions. The result of such is to push the business of farming down below all others, even to the very bottom of illiteracy.

### THE EXPERIMENTAL FIELD

of 44 acres has particular interest for visitors, as here are hundreds of neat, uniform plots of grains, roots, corn, grasses and clovers, growing side by side for comparison in varieties, dates of seeding, thickness, etc. For the first time in years variety tests in fall wheat were done away with, by plowing up the plots for other crops. A test in wintering had concluded by that time, and showed that the usually hardy, stiff-strawed, heavy-yielding, soft-grained Dawson's Golden Chaff had been winter-killed to the extent of 47 per cent., while the weaker, better-milling, millers' favorite Turkey Red had succumbed only to the extent of 35 per cent. A day spent in this field with Mr. Zavitz (who, by the way, is now in Europe) or one of his staff has valuable lessons for any farmer who will take an interest in what he sees and hears.

### FALL WHEAT FOR BREAD.

The assistant chemist, Robert Harcourt, B. S. A., had, just previous to our visit to the farm, concluded

the preparation of a bulletin, which will soon be published, giving details of his work in testing the bread-making power of various wheats, including both fall and spring. The object of the test was to arrive at, more particularly, the actual comparative values of Turkey Red, a fall wheat introduced by Ontario millers from Kansas, and such Ontario-grown sorts as Dawson's Golden Chaff, Michigan Amber, Clawson, etc., which are heavy yielders, but poorer milling sorts. In order to have the test as fair as possible, 10-bushel lots of each sort were carefully ground by one miller, and the last 100 pounds of the flour used for the test. The grinding was done at the beginning of last winter, when millers considered the wheat was in prime condition. The baking was done by a skilled Guelph baker, who gave each class of flour what he considered the most fitting treatment. From beginning to end the work was done with a view to exactness. With some varieties, 10-bushel lots of wheat were selected from different districts. For instance, Turkey Red was got from Kansas, also from two Ontario points. Below we give table, showing the varieties, number of tests, yield and estimated quality of bread from 100 pounds of flour:

FALL WHEAT.			
Variety.	Tests.	Yield. Lbs.	Av. quality of bread.
Turkey Red.....	3	157.6	95
Scott.....	1	148.2	90
Michigan Amber.....	5	147.9	88.6
Gen. Giant.....	5	147.4	84
James W. Fife.....	1	146.1	85
Walker's Reliable.....	1	145.7	80
Manchester.....	1	144.5	85
Early R. Clawson.....	3	143.2	75
Dawson's Golden Chaff.....	7	141.6	81.7

  

SPRING WHEAT.			
Variety.	Tests.	Yield. Lbs.	Av. quality of bread.
White Russian.....	1	154.2	100
Horison's Bearded.....	3	144.6	82.3
Colorado.....	2	140.1	75
Thicket.....	1	140.6	77.5

### SUGAR BEETS.

The second visit to the sugar-beet plots, planted under the auspices of the Ontario Government, had been made by representatives from the College previous to our visit. The reports of these men indicate that the plots in the east, about Whitby and Lindsay, are in better condition than those in the west. The cold, wet weather during May injured the beets to some extent, especially in low ground, and also where the seed was planted too deep. About one inch was the depth recommended the farmers to plant, and had that not been exceeded, the results would have been a more even stand of plants. In ordinary seasons, probably the deeper-planted seed would have come out all right, but this year much deep-sown seed rotted in the ground. In any year, one inch will be found a suitable depth in well-prepared soil, so perhaps the adverseness of this season's weather will prove advantageous in the lessons taught in the very beginning of our beet-growing experience. As a rule, the beets were all thinned by June 20th.

### THE DAIRY.

At stated hours, illustrated lectures were given the excursionists, in the largest dairy class-rooms, by Miss Rose and Prof. Dean, on buttermaking, care of dairy stock, etc. In front of the audience, on the large blackboard, was written a recipe for keeping flies off cows, as follows: For 25 cows, 1 gallon of fish, seal or tanner's oil, 4 ounces crude carbolic acid, and 1 pint of coal oil, well mixed and applied to all parts of the cow, except the udder, with a cloth or brush. The addresses delivered were listened to by both men and women with rapt attention, and we are much mistaken if some farmers' wives do not, as a result, change their methods of making butter; and thus the good work of education goes on.

In the line of investigation, Prof. Dean is experimenting with cheese-curing in varying degrees of light and temperature. He has one room well lighted and another totally dark. Curds from the same vat are divided, part of the cheese going into the light and part into the dark room. Both rooms are kept at the same temperature and humidity. It is expected the cheese will be cured by the middle of July, when they will be scored. Repeated trials in curing cheese in different temperatures above 50 degrees, Fahr., decided that about 65 degrees gave better results than any other, both in less shrinkage and higher quality. Curing at any warm temperature (above 50 degrees) fails to produce a uniform ripeness and flavor, and so last year Prof. Babcock, that illustrious dairy scientist, discovered that curing cheese in a temperature near the freezing point gave most desirable and uniform flavors. To this end, Prof. Dean, in the dairy department; Prof. Harrison, in the bacteriological laboratory, and Prof. Harcourt, in the chemical laboratory, are conducting tests with a view to ascertaining the actual cause and effect of low-temperature curing. The cold room stands at about 38 degrees, and in it are placed cheese direct from the press, those one week old, two weeks old and three weeks old all taken from the same vat of curd. In the meantime the cheese is held at 65 degrees, and a fifth cheese from the same vat as those placed in the cold room is being cured at 65 degrees. It is expected the cold-curing will require seven or eight months, and when it is completed, the scoring will be compared with that of the cheese cured at 65 degrees. Prof. Harrison will investigate the bacterial development, and Prof. Harcourt the

chemical, as the curing advances, so that considerable light upon cheese-curing may be looked for during 1901 from Guelph Experiment Station.

### THE POULTRY DEPARTMENT.

During the excursions, Mr. Graham, B. S. A., in charge of the poultry department, is kept very busy answering questions, as no end of people seem to have trouble with their poultry, and they come to him for information. He is asked about breeds, feeds, breeding, and all the rest of it, and he invariably gets a good audience when he commences to talk. He advised setting hens on the ground, making the nests of tansy, which will drive away lice. If this cannot be secured, a dozen camphor moth-balls will have the same desirable effect and do no harm. Mr. Graham has several hundred chicks under his charge, and he knows practically all about them all. The value of unlimited range for young chickens was clearly demonstrated in litters of the same age, some of which were confined to a few rods, along with other hens and broods, and others allowed free range in a clover patch. These latter consumed less food given them, and were much more stocky and vigorous. Mr. Graham is raising all his chicks to be used for breeding with hens, instead of with brooders, regardless of whether they were hatched by hens or incubators. While they may not grow quite as rapidly at first, they develop constitution and vigor. Those raised by brooders will be used for fattening.

Referring to the matter of poor hatches generally complained of, Mr. Graham got in January 50 per cent. hatches, 35 per cent. in February, 15 in March, and 10 until the middle of April, while by May 1st 75 per cent. of the incubator eggs produced living chicks. The low hatch during the winter months are considered to be due to lack of exercise and fresh air, incident to unavoidable close housing. An effort will be made to correct this next winter by compelling the hens to scratch over more straw for their feed, and by introducing more fresh air by means of a sub-earth duct opening beneath the stove, so as not to reduce the temperature unduly.

### OTHER DEPARTMENTS.

The farm and stock under Prof. Day all give evidence of judicious management. The crops are all particularly promising, and all the stock, except the sheep, are thrifty. It seems impossible to have sheep do well on this farm owing to the presence of tapeworm, which seem to have all conditions at hand for their favorable development. The most striking individual in the bull stable at the present time is a remarkably fine Shorthorn, imported in dam last year by H. Cargill & Son from Wm. Duthie. He is a beautiful roan, not large, but his quality is superb. He is by Bapton Conqueror (73981), and out of Sittytton Amaranth 4th, a cow closely related to Field Marshal and Abbotsburn. Prof. Day is having a modern system of ventilation put in the main cattle barn. It is practically the same as that recently described in the FARMER'S ADVOCATE by Prof. Reynolds, who has made a thorough study of ventilation, and is now gathering information and working out cold storage. In conversation with him we learned it is his opinion that mechanical refrigeration is the only feasible one for a district storage, such as, at least, every town should have.

The work on the new Massey Hall has little more than commenced, the excavation for the basement and a small portion of the foundation walls being under way.

### A Summer Trip Among Farmers.

(EDITORIAL CORRESPONDENCE.)

A holiday trip through fertile districts in Central Ontario in the leafy month of June in such a sappy season as the present is an inspiration to an agricultural editor, keeping him in touch with at least a portion of his wide constituency, and revealing the needs and the progress of his patrons in their interesting occupation. Leaving London, east-bound, and passing through portions of the Counties of Middlesex and Oxford, one is impressed with the general prevalence of pasture lands and comparatively large herds of dairy cattle, while the thrifty appearance of the farm homesteads generally throughout these the pioneer cheese-factory and creamery districts of Canada, indicate that the owners as a rule have done well by devoting attention to the milk business and pork production as a source of revenue. Tarrying for a night at Huntingford, the noted beef and grain growing farm and home of Mr. William Donaldson, of South Zorra, near the pretty town of Woodstock, to be christened a city on this Dominion Day, we find ourselves for the first time viewing the gold-medal prizewinning farm in a group of six western counties of Ontario, and second only in a provincial sweepstakes competition. Here is a 400-acre farm of strong land, well underdrained, kept scrupulously clean and neat, growing great crops of grain, clover, roots and corn, with thickly-set permanent pastures, closely resembling those of Old England, on which typical Shorthorns and Shropshires thrive. The wide avenue approaching the homestead, the roomy and parklike appearance of the grounds surrounding the dwelling, embowered in trees of Nature's planting, the extensive and substantial character of the buildings, and the general