

orchards. Amateurs' classes were suggested as distinct from commercial growers' exhibits.

At the close of the convention, the retiring secretary, Mr. Creelman, thanked the Association for the whole-souled manner in which they had all co-operated to make the Fairs Association a power for good in the agricultural world.

The officers for the ensuing year are: President, W. B. Saunders, Stayner; 1st Vice-president, J. W. Shepperd, Cayuga; 2nd Vice-president, Jas. Mitchell, Goderich; Recording Secretary, Alex. McFarlane, Otterville. Directors: J. T. Murphy, Simcoe; Rev. C. B. Clarke, Russell; W. E. Smallfield, Renfrew; E. Jeffs, Bond Head; Allan Gray, Uxbridge; Chas. Walker, Erin; R. R. Hall, Parry Sound; Secretary, H. B. Cowan, Toronto.

Fresh Manure Applied Direct.

Where manure is not too coarse, take direct from the stable, especially box stalls, and spread on the land as drawn. It saves time and expense, as the spreading from heaps, when dumped in loads, make about same work in spreading, and is not so evenly done, besides, should heaps freeze, it is often difficult to spread.

It is not often we have enough snow in Kent to hinder drawing out in winter, and if land is not too undulating, there is not much waste from washing or heavy rains; there is too much waste to pile in heaps, and expensive labor lost, besides it does not destroy all noxious weeds.

Don't think rusted straw tends to propagate rust when returned to the land.

Fermentation does not destroy all kinds of weeds, especially mustard or charlock.

We apply manure for corn and beans, by plowing down on pasture or meadow sod, when the land is not too stiff or heavy clay.

We have never used commercial fertilizers, always tried to make all the manure we could on the farm. Regard commercial fertilizers too expensive for farmers' general use.

In Kent we have generally plenty of straw and fodder, which sometimes cannot be got on the land till late; that is better to be piled when it can be done.

A. J. C. SHAW.

Kent Co., Ont.

Hired Help Problem.

"W. L. D." Grey Co., Ont., writes: "My father was a subscriber for the 'Farmer's Advocate' about thirty years ago. I am a subscriber now, and I think the 'Advocate' holds the first place among agricultural papers. I believe you are ever ready to help the farmer. Perhaps there never was a time when the farmer stood more in need of helpful suggestions than at present, when hired help is so scarce and wages high. Can you give us some hints from time to time, in addition to those already given in the 'Advocate,' to show how one man on a farm of 150 acres may, without overworking himself, make a comfortable living without hiring. What line or lines of farming can be carried on, several miles from town, that will help him to do this? What are the best methods of farming to accomplish this purpose? Perhaps some practical farmers among your many subscribers may be able to give something, such as Mr. John Campbell's article on page 124 of your January 28th issue, entitled, 'The Sheep Industry in Ontario.'"

The hired help problem is always more or less serious, and never more so than at the present time. Strikes and other troubles between employers and employees are always more prevalent when wages are high, and now, in addition to the extra wages to be paid by farmers, there is the increased difficulty of getting along with some hired men. Still, on the whole, it is more than doubtful whether it is wise for a farmer to try it alone. We know of farmers who have figured on it, and they have always come to the conclusion that it would be less profitable than to hire. That it can be done there is no question. A smaller area would have to be cropped, and a good deal more laid down to pasture. In the handling of some crops, neighbors could change work, as, indeed, owing to the almost impossibility of getting men, many had to do last summer. The main dependence, especially if far from town, would have to be on live stock. In addition to the hints contained in Mr. Campbell's article on "Fattening Lambs," we suggest the following possibilities. Keep, say, ten factory cows. One man could easily attend that number. Have a full complement of hogs, so that the income from them would equal that from the cows. For the hogs, grow some lucerne and rape pasture, and, besides, have merely enough crop to winter everything over well. The extra pasture land could be made use of by taking cattle in to graze. Another plan, involving less labor, would be to buy good steers in the fall, pasture until winter, then, by wintering over on hay principally, with a little grain added, which would not require much labor if they were dehorned and kept in loose boxes or comfortable sheds, and putting on grass in the spring, they should be fit for export in July or August. A certain amount of crop would, of course, be needed. This is a more risky business than the other, and calls for special skill in stock. We have heard of one farmer who makes a specialty of hog-raising. Nearly all he grows is fed to hogs, and he is doing well. A variation or combination of above might be more suitable than either.

T. B.

An English Agricultural College.

Knowing that the Canadian farmer is interested in news from the Old Land, the following brief description of a visit to one of the agricultural colleges there may be appreciated:

The Uckfield College, Sussex, Eng., is one of the lesser of the agricultural institutions which are scattered throughout England, but, nevertheless, well deserves a visit. Nestling among the grassy uplands of the Sussex Downs, this college has a peculiar fascination for one who desires to combine natural beauty with the pursuit of agriculture. Five minutes' walk from the village brings the visitor to the college precincts. At once he is struck with the neat arrangement of the shrubs and evergreens which surround the gravel walk to the college. A tour through the various lecture-rooms and carpentry shop brings him into the chemical laboratory, which, though small in size, is amply qualified for the important part it plays in the course of study.

The farm itself is situated about one mile from the college, and consists of 110 acres of arable land. Our first objective was the orchard and

Recommended to Students.

I wish to congratulate you upon the rapid strides which the Farmer's Advocate is making. I was very much interested in the proposed change from a semi-monthly to a weekly, and I must say that the weekly is an excellent paper. In fact, I regard the Farmer's Advocate as being one of the very best papers which come to my office out of more than seventy agricultural papers. It is one of the papers I recommend for our students to read and to subscribe for. Personally, I could not get along without it. There are three or four papers which I think very highly of: The Farmer's Advocate, English Live-stock Journal, Scottish Farmer, and two or three of our best American papers. Your paper is certainly one of the very best of those mentioned. Wishing you abundant success, I am,

Very truly yours,

W. J. KENNEDY.

Jan. 30th, 1904.

EDITOR'S NOTE.—Prof. Kennedy is a son of Canada, who has forged to the front in Uncle Sam's western domain, being now Professor of Animal Husbandry and Vice-Director of the Iowa State College of Agriculture and Experiment Station.

vegetable garden, which is some 15 acres in extent. The land is divided up into plots, with gravel walks between. Apple, plum and pear trees abound, all of which give a fair yield during the season. The bush fruits are represented by gooseberries, currants, raspberries—a special variety of the latter not ripening until November.

In one corner of the orchard is a tall wire arch, up which is twining apple trees. This is to show to the Sussex farmers what can be done towards beautifying their own homesteads, and is certainly a feature well worthy of imitation. The apple trees are pruned three times a year—twice for wood and once for fruit, when the leaves are on. A system of root pruning is also practiced here, and from results obtained clearly shows that it is absolutely necessary for the development of a crop. As we were leaving the orchard we entered a little frame house where the apples are stored, and were at once impressed by the size, color and quality of the fruit exhibited. The pear trees do not bear very well, owing, no doubt, to the nature of the soil, which is a heavy clay.

As our time was limited, we were unable to do more than rush through the stables, where we saw some 12 head of Jerseys and a flock of South-down sheep. We also noticed about forty head of steers, which were being fattened for the Smithfield market. This line of farming is, however, not at all popular in this country, owing to the very low prices obtained for beef, which does not permit the farmer to clear expenses.

Poultry farming seems to be the great industry in Sussex, as much as 40 tons of dressed poultry being shipped per week to Leadenhall market from the small village of Uckfield, which only boasts a population of 4,000.

As we walked to the Uckfield railway station, we concluded that our afternoon had been very profitably spent, and trust that we may yet again have the opportunity of spending another day among the beautiful scenery which the Sussex Downs afford.

A. N. M.

Fresh vs. Rotted Manure.

First.—Arrange your stables so that the manure can be loaded on sleighs or wagons, and taken directly to the field. Why? One handling is all that is required.

Second.—I would apply the manure directly to the land if no washing away takes place, that is on hill-sides, where the manure is liable to be washed into the hollows. In such cases, put it in small convenient piles, small enough so that it will not heat, and spread as soon as the greater part of the snow is gone. It is well to get it out before all the snow is gone, as we are not usually so busy at that season. On fields fairly level I would spread direct from the wagon or sleigh, until the snow gets over one foot deep, then put in small, convenient piles for spreading as soon as the snow is gone. The manure that is made during summer, when the crops are on the land, should be kept under cover, and in such a compact way that no heating will take place.

The following is taken from Prof. Shutt's report: This experiment consisted in taking two lots of fresh manure, equal in weight and alike in composition, and placing in a close (not air-tight) shed; the other, in an open wooden bin, with a practically water-tight floor; both lots being weighed and analyzed month by month for the period of one year (see report of Experimental Farm for full report). A few figures are here given that will enable the farmer to come to some conclusions as to the best plan for him to adopt.

Amounts and values of fertilizing constituents in fresh and rotted manures:

FRESH, IN PROTECTED SHED.

April, original fresh, 8,000 lbs.; total value of fertilizing constituents	\$10.43
May, one month after, same manure weighed 5,006 lbs.; total value of fertilizing constituents	9.76
June, manure weighed 3,451 lbs.; no analysis...	
July, manure weighed 2,980 lbs.; total value of fertilizing constituents	9.68
April, one year, same manure weighed 2,185 lbs.; total value of fertilizing constituents	9.05
Note the great loss in weight of matter so necessary for the improvement of the physical condition of the soil, also the loss of time in drawing and turning the pile to rot.	

MANURE IN EXPOSED BIN.

April, original fresh weighed 8,000 lbs.; total value of fertilizing constituents	\$10.43
May, one month after, same manure weighed 5,118 lbs.; total value of fertilizing constituents	7.59
June, manure weighed 4,124 lbs.; no analysis...	
July, manure weighed 3,908 lbs.; total value of fertilizing constituents	7.86
April, one year, same manure weighed 3,838 lbs. total value of fertilizing constituents	6.65
Results obtained in this investigation sum up as follows:	

First.—That there is a greater loss of nitrogen and organic matter from the exposed manure than from that protected. The former lost one-third of its nitrogen, the latter about one-fifth. Ten per cent. more organic matter was destroyed in the exposed than in the protected manure.

Second.—That there is practically no loss of potash and phosphoric acid from protected manure.

Third.—That the exposed rotted manure lost about one-sixth of its phosphoric acid and somewhat more than one-third of its potash.

Fourth.—The chief changes, due to fermentation, take place within the first month of rotting.

In the annual report of the Experimental Farms, details are given of the results of a series of tests which were carried on with the object of gaining information regarding the effects which follow the application of certain fertilizers and combination of fertilizers on important farm crops. The particulars there given covered the results with crops of wheat, oats, barley, corn, carrots, mangels, turnips and sugar beets.

Results are here given only for manure well rotted and fresh, direct from the stables, half horse and half cow manure, fifteen tons per acre:

Wheat, average for ten years' plot, rotted manure, 20 bushels per acre; straw, 3,544 pounds.	
Wheat, average for ten years' plot, green manure, 20 bushels per acre; straw, 3,598 pounds.	
Oats, average for ten years' plot, rotted manure, 48 bushels 14 pounds per acre; straw, 3,235 pounds.	