

good specimens on exhibition. Magill, an Island-bred horse, sire and dam imported, won the red ticket. John Balderston and John Richards showed good specimens, and got second and third. F. Boyer, of Bunbury; John Richards, of Bideford; James Clark, of Wiltshire, divided the honors in three-year and two-year-old sections.

The Carriage and Trotting classes were well filled, and contained many very fine animals. Competition was close in all the sections.

The large and excellent exhibit of cattle was the centre of attraction. The dairy cattle especially were scrutinized very closely; they seem to be in the ascendant just now.

The show of Ayrshires was large and the quality good. The herd prize went to Jas. Easton, Charlottetown, Royalty. This herd was headed by Highland Jack, an Island-bred bull of good size and quality.

The Shorthorn herd prize went to F. G. Boyer, of Georgetown. This herd was headed by Silver Chief, brought here lately from the herd of Arthur Johnston, Greenwood, Ont. This is a white bull, eighteen months old; he was much admired, and is likely to leave his impress on the stock of the country.

E. R. Brown showed a grand herd of Guernseys. This is the herd that Messrs. McNish, of Lyn, Ont., selected the cattle from for their herd that took the red ticket at the Toronto Industrial. Mr. Brown imported this herd from Guernsey a few years ago, and has got hold of a good strain.

In the Jersey class we noticed Rowdy Boy, a yearling bull from Mrs. E. M. Jones' herd, Brockville, imported by John Cowan, Murray Harbor South. This ought to be a good animal to breed up a milking herd from, as he is one of Mrs. Jones' best.

Although Jersey breeders were to the front with good animals, in Herefords, Galloways, and Polled Angus there was little or no competition, but good herds were shown in each case.

Sheep classes were well filled. In Leicesters honors were divided between Albert Boswell, Henry Lane, and Wm. Clark.

In Shropshires, Senator Ferguson carried off most of the prizes.

In Oxford and Lincolns, F. G. Boyer was ahead. In Cotswolds, John Tweedy was first.

There was also a fine show of grade sheep. In pigs the classes were well filled. The honors in Berkshires went to S. F. Drake, Cornwall; Henry Lane, Mount Millick; Robert Drake, Cornwall; and some others we missed.

Yorkshires—The red tickets were divided between Governor Howlam, R. E. Wright, Wm. Clark, and Francis Andrews.

James Essory, Union Road, showed Tamworths; a sow and bear from E. D. George's, of Ontario; also spring litter of eight nice pigs.

The show inside the building was good, though not so large as usual. The roots and vegetables were all that could be desired, and the fruit display was of the best quality, but this is the off year for apples here, and there was not so many shown.

NOTES.

McKinnon & McLean, machinists, of Charlottetown, showed a dairy engine built purposely for creameries.

Mr. Herbert Wright, of Guelph, Ont., who judged cattle, sheep and pigs, did his work carefully and to the satisfaction of all concerned. Exhibitors in these classes will always be ready to welcome him to our fair as judge, or in any other capacity.

In conversing with the leading exhibitors, we found in most every case that they were subscribers to the FARMER'S ADVOCATE, and were loud in its praises.

The King's County Exhibition, the last held, has just closed, and was a decided success. We found down there farmers who had competed at the Provincial, having a friendly competition at home among themselves. At Georgetown a very successful agricultural meeting was held on the afternoon of the show, and was addressed by Governor Howlam and Col. W. M. Blair, of the branch Experimental Farm, Nappan, N. S., who delivered an eloquent and practical address, and was listened to with marked attention.

Breeders of thoroughbred stock complain of poor sales at the fairs. The best Shorthorn calves from the Government stock farms sold at auction under \$25. But we noticed when the Ayrshires were offered they brought considerably higher prices.

The Charlottetown Driving Park and Exhibition Association have beautiful buildings and grounds, and are always making improvements to keep up with the needs of the times. The company is well managed, and I believe do all in their power to make the Provincial a means of advancing the agricultural interest of the Province.

Mr. Wright, the cattle judge, told your correspondent that we had the most perfect system of entering articles and animals for competition that he ever saw. Under the system it was impossible to get any clue as to whose articles were being judged. The numbers on the tags of the exhibits do not follow on in rotation. WALTER SIMPSON.

A trial shipment of 115 cases of choice Ontario apples has been shipped to Sydney, Australia, where they will arrive at Christmas. Their reception and disposal will be attended to by Mr. J. S. Larke, Canadian Commissioner.

Feeding Potatoes to Cattle--Will it Pay?

In the last issue of the FARMER'S ADVOCATE attention was called to the utility and best method of feeding potatoes, of which there is a plethora in many quarters this season, to swine. Recently in France some trials have been made in feeding potatoes, by Experimentalist M. Girard. The cattle selected for the trial were nine in number, consisting of three each of the Charolais, Durham-Manceau, and Limousin breeds. The live weights, which ranged from 1,760 lbs. to 2,255 lbs., bear evidence that the animals selected were already in good condition—they were at least heavy weights. Three of the animals were fed under disadvantageous circumstances, one being quite fat, and another so fatigued when it arrived at its destination that it refused to eat food for ten days.

Throughout the trial a uniform ration was fed—namely, 55 lbs. of potatoes steamed, 1 oz. of salt, 6½ lbs. chaffed hay, and a fraction over 13 lbs. of loose hay. Previous results had clearly demonstrated the superiority of steamed potatoes over raw, and it was accordingly decided to use the most advantageous system. The steamed potatoes were placed in alternate layers with the hay chaff in a tub, the mixture being well stirred, and left to ferment for twenty-four hours. This was fed thrice daily, and formed the only ration. The result is chiefly notable from the fact that no animal showed a less gain than 22 lbs. per day, while the highest gain was about 4½ lbs. The following table shows the ratio of increase:

Breeds.	Time of trial, Days.	Gain in live weight, Kilos.	Gain per day, Kilos.
Charolais.			
No. 1	63	131	2.079
" 2	71	105	1.464
" 3	85	86	1.010
Durham-Manceau.			
No. 4	71	75	1.056
" 5	71	96	1.352
" 6	71	87	1.225
Limousin.			
No. 7	71	132	1.858
" 8	71	88	1.760
" 9	71	77	1.084
Totals and average per day	624	877	1.405

[Note.—A kilogramme equals 2 2046 lbs. avordupois.]

The average daily gain in live weight was equal to 3 lbs. 1½ ozs. The potatoes used were Richter's Imperators, a heavy-yielding variety, and the percentage of starch they contained was from 18 per cent. to 18½ per cent., and about 2 per cent. of nitrogenous matter. It would be supposed that a great proportion of the meat produced by such a starchy diet would be largely veined with fat, but good judges say no. The dead and live-weight percentages ranged from 59.19 to 62.17, the average being 60.75. The facts enumerated are sufficiently astonishing (especially considering the mature weights of the animals to start with) to make the necessity for further investigation apparent.

Very properly our readers will ask: will it pay, even at present low prices, to convert potatoes into beef instead of selling them, assuming the result, as given, of the above experiment to be accurate? Nearly a bushel of potatoes per day and 20 lbs. of hay were fed. On a low estimate, valuing the former at 15 cents per bushel and the latter at \$15 per ton, we have an outlay for feed alone of 30 cents per day—terribly expensive feeding. The average gain per day, live weight, was a trifle over three pounds. This at five cents per pound would return fifteen cents, or only one-half the cost of the food consumed. Whether the French Professor compounded the most economical ration practicable in utilizing his potatoes is another question.

It is well to bear in mind in this connection also, that experimenters and practical feeders concur that the average gain per day decreases as the animal grows older and heavier, and also that the gain of the younger animal costs less. Hence it might fairly be assumed that with younger animals the gains would have been made with a very much less expenditure for food.

If any readers of the ADVOCATE have experience on the subject of potato feeding to any class of stock, our readers generally would be pleased to learn the result.

Christmas Beef.

Beef cattle intended for the Christmas market should be housed by this time. A casual look at the herd may convey the impression that the animals are thriving, as their coats have increased in length and their under line has dropped, as if progressing. A closer inspection, however, reveals the fact that they are losing their firm, elastic touch, and feel flabby to the hand. The grass has lost much of its nutritive value, and the pastures are damp and uncomfortable for outlying cattle. If they are housed at once and well fed, no further loss of weight will be sustained. Where ensilage is not used, the fodder should be cut up and mixed with pulped roots and a small amount of crushed grain at first, increased as the time goes on. The advantage of cutting and pulping the food is a matter of economy in food, but considerable extra labor will be involved by so doing, which should be executed as far as possible by wind, steam or horse-power.

Many successful feeders practice dosing, feeding cattle with sulphur as soon as tied in, as by that means they are rendered less itchy; therefore more comfortable. A thorough daily grooming should not be neglected, which also adds to the comfort and therefore conduces to a thrifty condition.

Potatoes as a Sheep Food.

Potatoes have been so generally regarded as the peculiar preserve of the human race that feeding them to stock seems quite a secondary consideration, except in the case of swine. Least of all should we fancy them as a sheep food, yet trials have proved that they are possessed of no little value as food for the ovine race. M. Girard, a well-known French experimenter, has fed tubers to sheep with results which ought to be further verified. The sheep on trial were fed on 5½ lbs. of potatoes, not quite 2 lbs. of hay, of which one-third was chaffed, and a little salt per diem. The sheep were divided into three lots of ten, the first lot being made up of three-year-olds, those in the second four-year-olds, and those in the third partly three and partly four-year-olds. Evidently in France they are much behind British and Canadian breeders in the early-maturity question. Lots I. and II. had their potatoes steamed, while to the third lot the tubers were fed raw. The experiment extended over ninety days, and the sheep showed an average daily gain in live weight per head of .40 lb. for the first lot, .38 lb. for the second, and .34 lb. for the third. The cooked potatoes proved most beneficial. The proportions of carcass to live weight were 52.87 per cent. for the first lot, 55.12 for the second, and 52.90 for the third. The quality of the meat, we are assured by good judges, was excellent. Most feeders would regard potatoes as too slow fatteners to suit modern ideas.

FARM.

Help the Water Away.

All that can be done in the autumn to hasten and lighten spring seeding should be attended to. To follow the wisest and most successful men's methods is a safe practice, and every really good farmer water-furrows his plowed land in the autumn.

The proper time to do this is when the plowing of the field is being finished, but when this has been neglected, it should be done at once, for fear of early freezing up, which often comes about the middle of November. In doing the work, every gully should have a furrow run right through it, and wherever land furrows are crossed the junction should be thoroughly shovelled out, so that water will readily run off into an open ditch or main drain.

As soon as the fall rains have started the under-drains flowing, every outlet should be inspected and made perfectly free and clear of obstruction; unless this be done the whole drain may be obliterated so far as its effectiveness is concerned. There is generally a little flow of silt in the water of tile drains, which if once blockaded soon fills back and back for rods, until a big job of lifting and cleaning is necessary to set the drain in working order. Whenever a drain ceases to work near a tree, the cause is usually from roots growing between the joints. The preventive, where practicable, is to cut down the tree, but if not, socket pipes may be used and joints cemented.

It pays well to look after drains carefully, as a plugged drain is no better than no drain, and it costs too much money and labor in construction to neglect.

A New Feature in Farmers' Institute Work.

According to arrangements being made by Supt. F. W. Hodson, of Guelph, ladies are to address Farmers' Institute meetings in Ontario during the coming winter. Miss Bessie Livingston, Superintendent of the Ottawa Cooking School, and her assistant, Miss Miller, have consented to deliver addresses on the following subjects, any time between Dec. 1st, 1895, and April 1st, 1896:—

Demonstrative lectures by Miss Livingston: "The Food Value of Milk and its Derivatives"; "Cooking of Milk, Cheese, and Eggs"; "A Practical Lesson on Invalid Cooking"; "Diet for Children"; "Cereal Food and Breakfast Dishes"; "The Cookery of Vegetables"; "Classes and Combinations of Foods"; "Hot Supper Dishes." Time, from 40 to 50 minutes.

Miss Miller's subjects, followed by short discussions: "The Farm Kitchen"; "The Five Food Principles and the Purposes They Serve in the Body"; "The Dietetic Value of Milk and Cheese," with illustrations of cooking them; "The Medicinal Properties of Fruits and Dainty Ways of Serving Them"; "Starchy Foods," Examples—Puddings and Breakfast Dishes; "The Economical Cookery of Meats"; "The School Children's Lunch-Basket." Food will be prepared and cooked before the audience, and served at close of lecture.

These ladies are highly recommended by Prof. Robertson, and James Mills, President of the O. A. C., Guelph. Institute officers who wish to secure the services of these ladies may do so by corresponding with Supt. Hodson.

One of our correspondents has lately written us that he has been fitting a young carriage horse on boiled potatoes, along with chopped hay with a small amount of ground oats, and finds very satisfactory results, as the horse is fond of the diet and is doing and feeling well. Where hay is scarce and dear, a large amount of straw may be made very palatable by chopping and mixing with mashed boiled potatoes.