

burne's grand young steer under two won in addition to its class prize the r.n. as best beast under two years. Average daily gains: Young steers, 2 lbs. 2.36 ozs.; older steers, 1 lb. 10.99 ozs.; young heifers, 1 lb. 15.66 ozs.; older heifers, 1 lb. 9.09 ozs.

#### SHEEP.

The entry in this section was somewhat smaller than last year, but the merit was good all through; the classification being uniform, i.e., one class for wether lambs and the other for wethers above one and under two years. The following facts will convey all the more important information that will be of use for future reference:

**LEICESTERS.**—Leading winners, Messrs. E. F. Jordan and Mrs. Perry-Herrick. Average daily gain of the classes: Lambs, 10.77 ozs.; wethers, 7.27 ozs.

**COTSWOLDS.**—Winner, Mr. W. Thomas, only lambs being entered. Average daily gain, 10.80 ozs.

**LINCOLNS.**—The winners were Messrs. S. E. Dean and Henry Dudding, the exhibit being specially good all through. Messrs. Dean's pen of wether lambs won the longwool championship, and Mr. H. Dudding's wethers were made r.n. to this winner, a notable success for the breed.

**SOUTHDOWNS** were the best represented breed in the show, as regards numbers, and probably one of average merit, taken as a whole, but the lamb class was considerably below those of some former years, whilst the wether class was in excess of the average. Mr. C. Adeane won in both classes, a fitting recognition of the high average merit of his well-known flock. He also took the breed cup. The Duke of Richmond, Mr. C. H. Berners, and H. M. the King were the other winners, in the order named. Average daily gains: Lambs, 8.36 ozs.; wethers, 4.98 ozs.

**THE HAMPSHIREs**, so far as quality is concerned, were as good as any, Mr. T. F. Buxton being the leading winner, closely pressed in the lamb class by Lord Rothschild, and followed in that for wethers by Mr. J. Flowers. Average daily gains: Lambs, 10.32 ozs.; wethers, 6.55 ozs.

**SUFFOLKS.**—This breed made a notable display, representing both quality and early maturity. Mr. H. E. Smith and Lt.-Col. E. W. Baird were the leading winners, the former taking the two firsts and the breed cup. Average daily gains: Lambs, 11.11 ozs.; wethers, 7 ozs.

**SHROPSHIREs** were a small display, Mr. P. L. Mills being the leading winner. Average daily gains: Lambs, 9.40 ozs.; wethers, 6.54 ozs.

**OXFORD DOWNS** were a small entry of good merit. Mr. J. T. Hobbs and H. W. Stilgoe, with Miss Alice de Rothschild, took the leading honors. Average daily gains: Lambs, 10.79 ozs.; wethers, 6.70 ozs.

**THE DORSET**, or other pure shortwool class, was not represented in its lamb section, three pens being sent in the class for wethers. Mr. J. Kidner won the average daily gain of the three pens, being 6.10 ozs.

The four cross-bred classes were of high merit all through, two of them being for English crosses and two for Scotch. In the former the Earl of Ellesmere won for lambs, and Mr. T. Rush for wethers, with a notable pen which gave an average daily gain of 8 ozs. Mr. J. McDowall won in the Scotch classes with good pens. Average daily gains of the four classes were: Lambs—English, 11.03 ozs.; Scotch, 9.43 ozs. Wethers—English, 7.43; Scotch, 7.49.

Mr. T. Rush won the shortwool champion prize with his specially fine pen of cross-bred Oxford-Hampshire wethers, Mr. T. F. Buxton being r.n. with the Hampshires; these, owing to Mr. Rush's pen not being eligible for the Prince of Wales challenge cup, won that honor.

#### PIGS.

This entry was quite as good as in former years, and judging from the average daily gains given in the different classes, it would appear that the practice of weighing these animals is one that is bringing home to the producers of pork some very useful lessons.

Space will not allow of much detail, but we may mention that Mr. Arthur Hiscock won the Prince Christian challenge cup for best entry in the section, and also the champion prize for the best pen of two pigs; and that the Hon. P. D. Bouverie was the leading winner for Small Whites; Mr. A. Hiscock for Middle Whites; the Earl of Rosebery for Large Whites; Mr. H. E. Wood for Large Blacks; Lord Hastings for Tamworths, and Mr. J. A. Fricker and Mr. N. Benjafield for Berkshires.

Each breed had a classification as follows: Under nine months and above nine months and under twelve months old. The average daily gains of these two classes for each breed is given in that order: Small Whites, 13.39 ozs. and 13.84 ozs.; Middle Whites, 1 lb. 3.38 ozs. and 1 lb. 3.45 ozs.; Large Whites, 1 lb. 6.85 ozs., and 1 lb. 7.14 ozs.; Large Blacks, 1 lb. 2.94 ozs., and 1 lb. 4.24 ozs.; Berkshires, 1 lb. 4.21 ozs., and 1 lb. 2.20 ozs.; Tamworths, 1 lb. 3.99 ozs., and 1 lb. 2.48 ozs.; any other distinct breed or cross,

1 lb. 5.24 ozs., and 1 lb. 5.86 ozs. Single pigs, under twelve months: Any white breed, 1 lb. 5.60 ozs.; any black breed, 1 lb. 3.67 ozs.; Berkshires, 1 lb. 2.43 ozs., and Tamworth, 1 lb. 2.80 ozs.

#### Sheep Management.

In opening the session devoted to the interests of the sheepmen at the Ontario Winter Fair, Guelph, Mr. John Campbell, Woodville, discussed the requirements of a sheep house. In building a suitable pen, as in other successful farm operations, notice should be taken of the preference of sheep for resting on dry roads as compared with grassy plots. This characteristic demonstrates that the building site of a sheep house cannot be too high and dry for the best comfort of the stock, for if there is one thing more than another that sheep do not like it is dampness; and to ensure perfect dryness in a pen it must be well lighted. Another characteristic of sheep to remember when building a house is that they require a lot of exercise during their whole lives. Notice how well lambs grow on the roadsides, where they have to follow the dams over considerable distances. Especially do pregnant ewes require exercise. These are points to bear in mind in selecting a site for building. The house itself can then be built of the desired material, but wooden walls are to be preferred. The place must not be made too warm, and must be well ventilated, else the sheep will show their disapproval of arrangements by sleeping out in the yard. The feed racks may vary, according to the variety of stock kept. With the Short-wools the side of the rack from which the sheep feed should be perpendicular, to prevent the chaff getting in to the wool. Beneath this rack there should be a trough for feeding grain and roots. Mangolds should never be fed to pregnant ewes, and never more than two pounds of turnips per day to the smaller breeds, nor four or five to the larger breeds, gradually accustoming them to this amount. Always look well to the water supply, in order to prevent the sheep acquiring an appetite for snow. Clean the pen out frequently, if roots and other succulent foods are fed. Provide plenty of salt; keep other stock away from sheep, and provide rape for pasture in the fall. Sheep should never be kept on permanent pastures, as the practice is sure to bring on disease and encourage parasites.

Col. McCrea, speaking of a fleece of wool, said that some years ago wool was worth in this Province 50 cents per pound, now it sells for less than 10 cents. Shoddy and Australian production are the chief causes of the decline. Nearly all the woollen goods put upon the market are shoddy with a wool body. Most of our long Canadian wools are now used for carpets. We can improve the quality and value of our wools in two ways: First, by keeping our sheep cleaner, and by more carefully feeding. Every break in wool lessens its value, and these breaks are caused by contact with harsh dirt, and by periodic indisposition of health. In manufacturing, wools are stretched five times their original length, hence the importance of securing a good fiber.

#### Closing Winter Fair Meeting.

The closing session of the Winter Fair meetings at Guelph was devoted to the discussion of pedigrees. Mr. M. Cumming, of the Ontario Agricultural College, opened the meeting with a thoughtful, clearly-enunciated definition and explanation of the word pedigree, showing how in the hands of one unfamiliar with the history of a breed a pedigree is only a collection of unfamiliar terms, but to a student of a breed it lays bare the characteristics of the whole line of ancestors of the animal whose pedigree one is inspecting. Pedigrees of themselves are of little value unless studied in conjunction with the history of any particular breed, and in no case does a good pedigree compensate for a mean individual. Throughout the series of meetings discussions were held upon beef, bacon and mutton carcasses, with examples of each before the audiences, and these discussions constituted one of the most helpful and educative features of the fair. On the last afternoon the carcasses entered for the block competitions were put up at auction. All the pork was sold in one lot to Puddy Bros., of Toronto, for \$7.35 per cwt., being from 50c. to \$1 higher than market quotations. The highest price beef carcass was that of a grade steer exhibited by A. McDougall, Guelph. The mutton carcasses ranged from 4.5 to 11.5 cents per pound, the latter price being paid for that of a wether under one year, exhibited by John Campbell, of Woodville, Ont. Some excellent Christmas poultry was also disposed of at prices that allowed of everyone securing a holiday bird.

I received the "microscope" quite safely. Thank you very much for sending it so promptly. I am sure it will prove a benefit to us. We enjoy the "Advocate" very much, and would not be without it. MRS. ROBT. PATTERSON.  
Haldimand Co., Ont.

#### Beef-makers' Session.

"Requirements of a cattle stable" was the subject of A. P. Ketchen's address at the Ontario Winter Fair. The building of a barn into a bank, especially if the hill is of clay, is found to be a mistake. The plan is sure to result in dampness and poor ventilation. When built on a level site, the temperature is more uniform, the air drier, and the stable easier ventilated. There is no wall just as good all round as a cement wall, brick being next. Stone walls usually mean damp walls. Sunlight is becoming more valued now than formerly, for apart from its convenience it imparts some vital principle to all animal life. Ventilation, although a prime necessity, is not as yet reduced to a practical demonstration. Small openings well distributed are to be preferred to fewer larger ones. A system of ventilation that can be recommended was outlined. Its principle is to introduce the fresh air through a ten-inch pipe under the floor in front of the cattle, and tap this large supply pipe with small outlets in front of each stall. This ten-inch supply would be sufficient for twenty head of stock; where more were kept, another pipe might be laid, or a larger box used. This admits the fresh air. The foul air is then removed at the ceiling by chutes, which run straight to the roof, preferably up the purline post, where these are straight, and opening directly through the roof. The roof outlet should extend two or three feet above the level of the ridge board. A foul-air chute should never be placed against the cold side of a stable, as the lower temperatures condense the moisture in the gases, thus causing dripping. The floor is one of the most important considerations in building a stable. Concrete is the best and cheapest material to use, but should not be finished smooth.

Hon. John Dryden, leading the discussion, emphasized the statements of Mr. Kitchen, and observed the immense advantages in having individual watering tanks for cattle.

Mr. Simpson Rennie took up the question of selecting steers for finishing, and said: In looking over a steer take both a side and end view. Two steers, poor and good ones, were used to illustrate the address. When putting up cattle in the fall, see that they are free from vermin. Shear the hair off the back, and apply crude oil, with one-half pint of turpentine to one gallon of oil. This should be done just as soon as the steers come in, as the warm stable soon encourages the breeding of lice, which become nested in the cracks of the walls. Mr. Rennie prefers tying the animals to letting them run loose, as it allows of catering to the individual. Feeding steers is like running a machine; they can and should be fed to their full capacity, but not overdone. A good feeding ration is two parts peas, one part barley, two parts corn, two parts oats, one part linseed meal, with twelve pounds hay, thirty pounds roots. Eight pounds of grain per day of the above mixture could be fed in three feeds per day. The hay need not be cut, nor roots pulped. Of this ration a 1,000-pound steer will eat (estimated at the selling price of the increased weight) 13½ cents worth per day, or \$25.52 worth in a period of six months. Assuming that such a steer cost 3½ cents per pound in the fall, his total cost would amount to \$60.52 when ready for market. In feeding, however, he should gain 300 pounds, weighing in the spring 1,300 cwt. He should then sell for five cents per pound, making his total value \$65, a cash gain of \$30, but a real gain of \$4.50. To this must be added the enhanced value of the foods fed, which on the market would be worth only \$16.35, feeding having added \$8.27 to their value, thus bringing the total profit in feeding such a steer up to \$12.77, not including the manure. This brings out the main point in feeding cattle: That the profit is derived from the increased market price of the grain fed, and from the increased fertility secured to the farm, for on this basis of calculation grains would bring more than one and a half cents per pound.

#### DISCUSSION POINTS.

Rough, coarse steers not only are unprofitable feeders, but detract from the value of the whole bunch.

Store cattle are the hardest class of cattle to judge, as it is a question of staking on possibilities.

In buying, watch out for breeding quality.

For long-keepers begin feeding grain about the first of January, with about two or three pounds per day, gradually increasing until by May a 12 or 13 cwt. steer is eating eight to ten pounds of grain per day.

An approach to a balanced ration should be followed, but not in a hard and fast manner.

When feeding gluten feed, the meal ration may be considerably reduced, even to five pounds per day.

Rape is one of the best foods to start steers on in the fall and early winter. Gluten feed seems to increase the digestibility of other foods.

The cost of producing stockers until twelve months old was discussed by Prof. Grisdale. The