

ing, owned by Mr. Wm. Clark, Netherlee, Cathcart; and this year, at Birmingham, Scottish-bred horses, namely, a pair of geldings owned by Messrs. J. Young & Sons, Edinburgh, were again victorious, beating two teams of Shires. Last year the award was made by two English judges; this year it was made by one judge, who had been adjudicating in the Shire horse ring on the first day of the show. These victories two years in succession show clearly that geldings of Clydesdale breeding can hold their own against Shires any day. The winning horses this year were both bred in Scotland, and were first and second at Glasgow in April. One was bred in Dumfriesshire, and is a pedigreed Clydesdale, a grandson of Macgregor, and the other was bred in Aberdeenshire. The Dumfries horse, it is worth observing, was got by the same sire, Lyon of Purdomstown 4520, as the champion of last year. He was bred by Mrs. Gass, Homgillside, Ecclefechan. Lyon of Purdomstown was a big, powerful horse, with a magnificent fore end.

Apart from showing, the chief items of interest at present are the publication of official reports on Cheddar cheese making with the aid of pure cultures, the founding of a flock book for Border Leicesters, and the opening of the early potato market in Ayrshire, where as high as £46 10s. per acre has been paid for early potatoes. There is also a slight revival in the Clydesdale export trade, and several useful, well-bred colts have within the past month or six weeks gone to Canada. We hope the revival in this department will continue and be a steady trade. It is better so than a spasmodic outburst such as was seen ten or fifteen years ago. The one experience necessary in the dairy world here is an increase of technical knowledge. Good has been done in recent years by what instruction has been conveyed, but much more requires to be done before anything like satisfactory progress has been made. Accurate knowledge of the conditions of the milk in cheesemaking belongs to only a few; but it is idle to expect anything like a general advance in quality until what is the peculiar heritage of the few becomes the universal heritage of the many.

### The Royal Show.

#### SPECIAL SHEEP AND PIG REPORT.

The sheep section was a grand one and a sight that sheepmen in every country should have seen. Nowhere else in so small an area could so large and meritorious a collection of the different breeds be seen. Here there were specimens of no less than seventeen distinct breeds on exhibition, and when it is remembered that these were the select of the best of the country a true conception of their high value and merit can be realized. Space will not allow of a fully technical description, therefore I must content myself by giving a brief outline of the more prominent features in each separate breed.

**Leicesters**, with twenty-three entries in two female and three male classes, were good, level and strong. Mr. J. J. Simpson led the way for old rams, ram and ewe lambs with grand pens, most typical of their breed; whilst Mr. G. Harrison was to the fore with yearling rams and ewes, the latter a particularly fine pen of great character and quality. Mr. E. F. Jordan was also well to the fore.

**Cotswolds** were present to the number of twenty-three; a grand lot; larger in numbers and better in quality than we have seen for some years. In the classes for old rams, yearling rams, ewes and ewe lambs Messrs. Garne were first and second with highly meritorious pens, particularly in the yearling ram and ewe classes. In the latter, a third premium also went to these gentlemen, these exhibits being such that few, if any, could exceed in quality and true breed type. Mr. R. Swanwick was first and second for two grand pens of ram lambs, as well as being noticed in other classes.

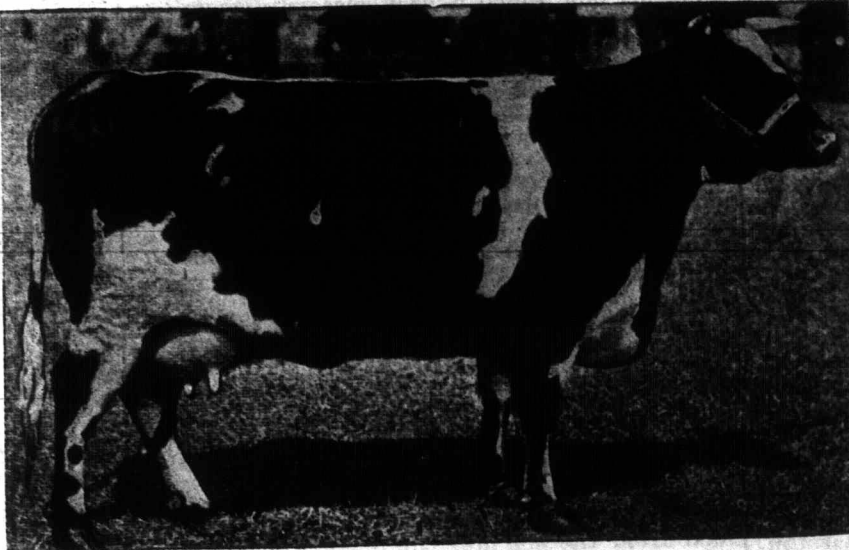
**Lincolns** were present to the number of sixty-two entries in six classes, wherein were contained some of the grandest sheep the breed could produce, Mr. Henry Dudding being at the head of the section, winning, as he did, the champion award of the breed with his grand typical yearling ram, of true type, fine character, and fleece and skin of the highest quality and value. This ram is one for whom, previous to his Royal victory, the sum of \$2,000 had been refused. The R. N. for champion was Mr. J. Pears' grand good ram, two years old, who was bred by Messrs. S. C. Dean & Sons, whom it may be known were purchasers of Mr. Henry Dudding's \$1,750 ram in 1896, which ram won for Messrs. Dean the champion award at this show in 1897; thus for two years the Riby flock has bred the Royal champions. Mr. H. Dudding won, in addition to the above, first and R. N. for yearling ewes, second for ram, ram lambs, second and R. N. for ewe lambs, and second for pen of five yearling rams. Mr. J. Pears won first for old ram, third for five yearling rams, R. N. for ram lambs, second for yearling ewes, and first for ewe lambs. Mr. J. E. Casswell's grand ewes, and first for ewe lambs, was most prominently to the fore, and though not included as often as some others in the money was throughout there or thereabouts. This exhibitor's grand, deep and good bodied sheep, with fleece, staple and character of the highest merit, ran very close for the premier place in the old ram class, wherein he came in for second honors. Messrs. S. E. Dean's flock secured the R. N. in the old ram class, as well as being close up in several others. Mr. T. Casswell and Messrs. T. R. & H. Casswell were also well to the fore, as was also Mr. T. Herd, a breeder whose flock has great merit.

**Oxford Downs** made a larger and more general exhibit than has been the case for some years past. The yearling

ram class was not a strong one, especially the premier prize sheep of Messrs. Treadwell's, who also came in second for old rams. Mr. J. C. Eady's flock was well to the front, being represented by his grand unbeaten pens of ewes, which won first and second, and by two rams of great merit, which secured second and R. N. respectively. Messrs. Hobbs went to the top with a good typical old ram. Messrs. W. Arkell, A. H. Wilson and H. W. Stilgoe were leaders in the lamb classes.

**Shropshires**—In the seven classes for this breed were no less than 122 entries. Perhaps the most striking feature of this exhibition was the pronounced and uniform type that prevailed through the whole of the classes. Mr. D. Buttar's exhibit was a grand one, and the record he established in the male classes is one that will be hard to beat. He had eight rams entered, three as singles in the yearling ram class, which secured first and champion, H. C. and C., and five in the pen of five yearling rams class that secured first prize therein, the champion ram being a grand one both in flesh, character and type. Mr. A. Tanner came first in the old ram class with an extra good sheep, last year's champion, Mr. J. Bowen-Jones' flock being second in yearling rams and third in yearling ewes. Mrs. Barr's flock was prominently represented, securing, amongst other honors, first for ram and ewe lambs and second for pens of five yearling rams, etc. Mr. R. P. Cooper, of sheep dip fame, went to the fore with a grand pen of yearling ewes, and J. L. Naper and P. L. Mills were also numbered amongst the leading winners.

**Southdowns** made a grand show; seventy-four entries were present. The old ram class was headed by a really grand sheep of Mr. E. Mathews' breeding, followed by Mr. J. J. Colman's ram, this same breeder being also first and second with yearling rams, a lucky win. The Pagham Harbor Co.'s stock were well to the fore with grand typical sheep, being C. for old rams, third and R. N. for yearling rams, and first for both ewe and ram lambs; grand ones, too, they were; also third for ewes. Mr. W. Toop was well up, winning a well-deserved second for yearling ewes, a class wherein Sir James Blyth led the way. Mr. A. Heasman and the Duke of Richmond were also well up.



SHORTHORN COW, JEWEL II, CHAMPION FEMALE OF THE BREED AT THE ROYAL SHOW, BIRMINGHAM, 1898; OWNED BY C. W. BRIERLEY.

**Hampshire Downs** were of great merit in respect to old rams, yearling ewes and ram and ewe lambs, but not so good in yearling ram class, Mr. A. de Mornay being to the fore with old rams, yearling rams and yearling ewes, the latter an unbeaten pen. Ram lambs were headed by a grand and typical pen of Mr. J. Flowers' breeding, and these were closely followed by Earl Carnarvon's pen, who also in the ewe lamb class led the way with a grand pen, hard indeed to beat, full of type and substance. Mr. W. T. Twidell, T. Palmer, Lord Rothschild, and T. F. Buxton were also well to the front.

**Suffolks** were numerically a poor show, Earl of Ellesmere being the leading winner throughout, except in one class, where Mr. S. R. Sherwood led the way.

**Border Leicesters** were well and largely shown, good in type and character throughout, Messrs. J. E. Nicholson, G. Laing, J. W. Hall, John Twentyman, R. Hay, F. Winter, and Rt. Hon. A. J. Balfour being amongst the leading winners.

**Dorset Horns** were shown only in small numbers, Mr. W. R. Flower and H. L. B. McCalmont dividing the prizes between them, the former winning with grand rams of great merit.

**Kentish or Romney Marsh** were rams of great and exceptional merit, and as these are a breed not well known with you it may be as well that your breeders should give them a trial, for in them there is money, as they are hardy, great rustlers, and good wool and meat producers. Mr. W. Millen was first for rams, as well as second, whilst Mr. J. S. Godwin also went well to the front with a really grand specimen. Messrs. A. Amor and G. W. Finn were also well to the fore. In ewes, Mr. F. Neame's flock led the way, whilst Messrs. H. Rigden and W. Millen were well to the fore with very capital ewes.

**Wensleydales**, a breed worthy of trial with you as well, made an excellent exhibition, and they were of great interest as well as of good quality. Messrs. T. Willis, J. Rhodes and J. Hough were the leading winners.

**Cheviots** were also well to the fore with a very small entry, Messrs. John and Jacob Robson being winners.

**Black-faced Mountain** sheep were a nice level lot, interesting and picturesque. Messrs. J. Vickers, T. D. Argue and Robson were most prominent.

**Lonks, Herdwicks and Welsh Mountain** were also well to the front in good quality and type.

#### PIGS.

This section of the show was a very good one and its

exhibits were of great quality and merit.

**Large White Yorkshires** were present in strong force, Mr. P. L. Mills being first for old boars and sows, as well as champion for the breed with his grand boar, Ruddington Lad, a pig of great quality, substance and build. D. Daybell, D. Gibson and F. Allmand were also well up in the prize list.

**Middle Whites** a very capital entry of great uniformity and merit, Mr. A. C. Twentyman being the champion winner, as well as a prominent one in other classes, with grand typical pigs of even quality and first-class merit. Sir Gilbert Greenall, Messrs. Sanders Spencer and A. Hiscock were also prominent winners.

**Small Whites** made, for them, a very large and meritorious exhibit. Mr. D. Gibson was winner of the champion award with a grand pig, the Hon. P. D. Bouverie heading the other two classes with grand typical pigs of great merit.

**Berkshires** were indeed a grand lot, full of animals of most perfect type and conformation were the whole of the classes allotted to this breed. The Earl Carnarvon was leading man in these classes, securing the championship honors with a grand and typical sow of the highest merit, Messrs. J. Jefferson, Russell Swanwick, J. P. King, J. W. Kimber being also amongst the winners.

**Tamworths**, a breed well-known and justly appreciated in your country, made here a grand show of very first class animals, which did their breed great credit. Mr. John Norman was winner of the champion prize, as well as being well to the fore in class prizes. Messrs. D. W. Philip and R. Ibbotson were also well to the front in what must be called a first-class exhibit of the breed.

### Experiments with Fattening Steers.

SIR,—There is considerable difference of opinion among cattle feeders as to whether a light or heavy meal ration is most profitable for fattening animals. As this is a very important practical question, investigations regarding the problem were commenced in the winter of 1896-7, in which steers were fed heavy, medium, and light rations, with results very much in favor of the medium and light rations as compared with the heavy ration. As the individuality of animals very materially effects results, the experiment was repeated during the past winter on the following plan:

The fattening period covered by the experiment was planned to extend over six months. Nine steers were divided into three groups with three steers in each group. It was planned to start group 1 on a fairly light ration and increase rapidly until they reached, as nearly as possible, one pound of meal per day per 100 lbs. live weight. Group 2 was to receive, as nearly as practicable, two-thirds of a pound of meal per day per 100 lbs. live weight. Group 3 was to be started on about one-third of a pound of meal per day per 100 lbs. live weight, and gradually increased, as deemed advisable, until equal to group 2. The experiment commenced Dec. 3rd and closed May 31st, thus covering a period of 179 days. The daily meal rations for each group were approximately as follows:

	Group 1.	Group 2.	Group 3.
December.....	8 lbs.	6 lbs.	4 lbs.
January.....	10 "	8 "	4 1/2 "
February.....	11 "	9 "	5 "
March.....	12 "	9 "	5 "
April.....	13 "	9 "	9 "
May.....	13 "	10 "	10 "

One steer in group 1 was considerably lighter than the other two, and his daily meal ration was one pound less than the quantities stated above for group 1. The meal ration consisted of equal parts by weight of peas, barley and oats.

In order to show the relation between the weight of meal and the weight of the steers the following table is appended, in which the calculations are based upon the quantities of meal actually consumed. The table shows the average weight of the steers for the whole fattening period and the relation which the meal rations bear thereto.

#### AVERAGE WEIGHT OF STEERS AND MEAL RATIOMS.

	Average weight of steers throughout feeding period.	Average daily meal ration per steer.	Average amount of meal per 100 lbs. live weight.
Group 1 (heavy ration)....	1,329 lbs.	10.66 lbs.	.81 lbs.
" 2 (medium ration)....	1,265 "	8.21 "	.65 "
" 3 (light ration).....	1,260 "	6.68 "	.53 "

It will be seen from the above table that group 1 averaged slightly over four-fifths, group 2 slightly under two-thirds, and group 3 a little over one-half of a pound of meal per day per 100 lbs. live weight.

In addition to the meal ration the steers received equal quantities of roots, together with what hay and straw they would eat, all fodders being carefully weighed.

As the experiment proceeded one steer in group 2 and one in group 3 were discarded as unsuitable