

**CHESTER WHITES.**—Four times stood fourth; three times fifth, and once sixth, in the list.

I am quite free to confess that I cannot arrange the breeds in order of their ability to make cheap use of food from the results given here. Possibly some reader can do so for us. The Berkshires, so far as these experiments go, have, I should say, the best standing, and next to them come the Yorkshires, and probably the Durocs and Tamworths, in order named. But what about Poland-Chinas and Chester Whites? Are we to believe that these two breeds, which are so widely and favorably known in the United States, are inferior to the Yorkshires and Tamworths in point of being able to utilize food to advantage? I do not think that any sane man will make this claim. If, then, we do not consent to the proposition as laid down, is it fair to say that the Berkshires are superior to either Yorkshires or Tamworths, on the same kind of evidence? Since all the breeds go up and down more or less in the different experiments, is it not only a reasonable conclusion that there were other reasons entering into the experiment than merely the breed of the animals, and that, after all, there is nothing in breed so far as economy of production is concerned. These experiments were conducted as accurately as it is possible to conduct livestock experiments. All food was carefully weighed, and an accurate record kept of food consumed and gains made by the hogs, and as a result we have the figures submitted above. Against these, we have the assertion of a great many farmers that the bacon type of hog is more expensive to produce than the fat type, and yet we have no figures submitted by men who make this claim to show that their claim is a just one. In any experiment comparing breeds, some breed has to come out ahead, but it does not follow that its standing was the result of the breed to which it belonged, but rather to the individuality of the animals representing the breed in that particular experiment. All breed tests which have been conducted go to show the same thing, and before reckless charges are made against the bacon type of hog, men should be very careful to have accurate figures upon which to base their charges.

I would like also to say a word regarding the position taken by Mr. S. A. Freeman on page 117. The blood meal and tankage fed in these experiments were supplied by Swift & Co., of Chicago, and I am sorry Mr. Freeman takes an unnecessary fling at the Davies Co., who do not manufacture either blood meal or tankage for swine. The fact that these hogs were fed blood meal and tankage is, in my opinion, rather against cheapness of gain. However, they were the only ones in this year's work which could be used for the comparison we wished to make, and therefore I quoted their results. I am afraid Mr. Freeman has overlooked the statement at the close of my address at the Winter Fair, that the figures offered are not considered as final, but are merely thrown out to start people thinking, while we are at work obtaining further results. Evidently they have accomplished their purpose, though I am sorry to see that the position taken by some is rather that of the adverse critic than of a person anxious to sift the matter to the bottom. I would like to repeat that the figures in the paper at the Winter Fair were never intended as final, and they are subject to revision. We may find that it costs much more than the amount stated in the article, or we may find that it costs less. In either case the results will be made public. We have no axe to grind in this matter. Our simple aim is to get at the truth, and we trust that farmers and others will give us their assistance in the effort.

Mr. Freeman also cites a disastrous hog-feeding enterprise undertaken by Mr. A. R. Pierheller & Sons. Nobody will dispute what he says, and everyone is willing to admit that a man may easily feed hogs and lose money on them; but if we undertake to prove from a single instance of this kind that hog-feeding in general is unprofitable, would not the same kind of reasoning prove that every business or undertaking under the sun is unprofitable, even the running of a packing-house? We find money lost in almost every undertaking, and we also find other men who are making money in the same kind of business.

I would like to call attention to a very short letter on page 121, from the pen of Mr. E. R. Soper. This gentleman fed a number of hogs from the time they were two months old until they weighed 200 pounds alive at a cost of \$5.50 per hog for meal purchased. He does not state what else he fed, but we would have to attach a very high value to the ordinary by-products of the farm in order to make out that these were expensive hogs, and it will be noted, also, that they were of the despised Yorkshire breed. I have no doubt that other gentlemen could give us equally favorable figures from Tamworths, as well as from other breeds of swine, but it is a significant fact that these apparently very cheap gains were made by swine of approved bacon type.

Mr. Freeman makes a proposition, but I do not think the plan is practicable. Surely Mr. Freeman would not expect us to use sows under nine months old. They should be at least twelve

months old before they produce their first pigs. I may add that "The Farmer's Advocate" has just come to hand, Jan. 27th. I can promise Mr. Freeman, however, that he will have as full and satisfactory a report of our feeding operations as it is possible for us to give, and I can also assure him that we are not trying to prove that hogs can be produced at a very low price, but we are simply trying to get at the facts of what it actually costs to raise hogs.

Trusting, Mr. Editor, that we may have the co-operation of Mr. Freeman as well as that of many other intelligent farmers in our effort to investigate this matter, I am,

O. A. C., Guelph.

G. E. DAY.

### A Study of Breeds of Swine.

#### BERKSHIRES.

The Berkshire is one of the oldest of the improved breeds of swine, and is named from the County of Berkshire, in England, in which they have been numerous bred, but the principal im-



Berkshire Sow.

provement of the breed was probably made in Leicestershire and Staffordshire. The original Berkshire was a large, coarse animal. The color was sandy, white or reddish-brown, spotted with black. The breed was brought to a considerable degree of improvement in the eighteenth century. The precise step taken at the first to improve the breed is not very well known, but it is pretty generally conceded that Chinese, Siamese and Neapolitan crosses were used, more especially the first mentioned.

Prominent among the early improvers of the breed are the names of Richard Astley and Lord Barrington. Among the more noted of the later improvers, the names of W. Hewer, Sevenhampton; Rev. H. Bailey, Swindon; Heber Humfrey, Shrivensham; Russell Swanwick, Cirencester; and T. A. E. Hayter, Salisbury, may be mentioned as prominent breeders.

Berkshires were probably imported into Amer-



Berkshire Boar.

ica in 1823, but the date usually given is 1832. The breed was imported to Canada in considerable numbers, and first became popular on this continent in the sixties of last century, while in the seventies, and later, so great was the demand for them in the United States that fabulous prices were paid for notable specimens, a boom from which Canadian breeders and importers reaped a rich harvest, culminating in the sale, in 1875, by John Snell's Sons, of Edmonton, Ont., (now Snellgrove), to N. H. Gentry, of Sedalia, Missouri, of the imported boar Lord Liverpool for \$700, the

sow Sovereign Lady for \$500, and Royal Duchess for \$400. In the ten years following that date, higher prices than these were reputed to have been paid, T. S. Cooper, of Pennsylvania, having been reported as selling a boar for \$1,400, and Mr. Gentry one for \$1,000.

Previous to 1870 the breed suffered on this continent from the influence of a fad for short, dished faces and perfect color markings, the demand by new breeders being for white markings only on the face, ankles and end of tail, and so widespread and general did this fetish become, that these were the principal points required by such buyers, the more essential qualities being regarded as secondary. The payment by Mr. Gentry of \$500 for the sow Sovereign Lady, with a white mark on her shoulder as large as a man's hand, did much towards breaking up this fad, as she was a model in conformation and quality, and a prizewinner at the Royal Show of England, while her companion, Royal Duchess, whose markings were not quite up to the extreme of fashion, was the ancestress of a boar sold by Mr. Gentry last year for \$2,000.

#### LEADING CHARACTERISTICS.

As now bred, the Berkshires are, as a rule, larger than any other breed, except, perhaps, the Yorkshires. The breeders have, in recent years, given more attention to improving the form, by selecting and mating the longer-bodied specimens, by giving more attention to outdoor exercise of the young and growing pigs, and by feeding less of rich, concentrated foods, and more of such grains as oats and barley, together with shorts and bran, roots and clover. By these means the breeders have succeeded admirably in this object, while retaining the general character of the breed, such as pleasing head, without the extreme dished face and heavy jaw which has been the bane of some of the other large English breeds as well in the past, as observation has revealed that the extreme short neck and heavy jaw are often associated with short and labored breathing, liability to pulmonary troubles, and inability to throw off disease when attacked by such. Great improvement has also been effected in securing smoothness of shoulders, the shoulders of the ideal Berkshire fitting neatly and evenly into the body, in line with the sides. This improvement is the more valuable, since a broad, fat back is not desirable from the bacon standpoint, but a medium wide back, well covered with firm flesh, and the back slightly arched and strong. These points have been well attained in the case of the best Berkshires of the present day. In general adaptation to climatic and other conditions, the Berkshires probably stand at the head of all the improved breeds, all things considered. Their color is in their favor, as a black skin will not blister, mangle or crack under a hot sun. They are hardy, active, good grazers and rustlers, while having a quiet and contented disposition, they mature early, and may be fattened at any age, but will grow and develop lean meat rather than fatten if given a range of pasture, while, as feeders, their strong digestive and assimilative powers enable them to give a maximum return in first-quality flesh for the food consumed. They also weigh well for their appearance, and dress well in proportion to live weight.

#### VALUE IN CROSSING AND GRADING.

None of the breeds of swine have been found more useful than the Berkshire for crossing on other breeds and grading up common sorts to the standard demanded by the markets. They have proved of great value in refining the coarser breeds and improving the quality of the flesh, the lean and fat being well intermixed. As to their breeding qualities, or prolificness, while they probably do not, as a rule, produce as large litters as some of the other large breeds, they vary with the varying conditions to which they are subjected, as do the

other breeds. Sows of any breed that are fed fat when young, and this course continued from generation to generation, naturally become less prolific, while those allowed free range of pasture or yards while young and growing, rather than fattened, will produce larger litters and mother them better. The large type of Berkshire sows, as a rule, produce good-sized litters of not infrequently ten or a dozen pigs at a birth, and they are, as a rule, good nurses. The Berkshires are second to no breed in strength and vigor of constitution, healthfulness, and the power