

he will be liable to prosecution should he send something else. There is nothing in all this to harm the honest trader. He can view with equanimity all legislative efforts of this kind. They do not affect him, and they certainly protect him against the competition of his unscrupulous neighbors.

Clydesdales are being exported to Canada in great numbers. A week ago fifty head of well-bred fillies and four colts were shipped per the Donaldson Line to Messrs. Prouse & Innes, Woodstock, Ont., by Mr. Taylor, Park Mains, Renfrew; and to-day, Mr. John Vance, from Tavistock, Ont., has sailed with twenty-seven fillies, purchased in the Mochrum district of Wigtownshire, whence Mr. Vance's father sailed to Canada many years ago. The shipment of Prouse & Innes has never been excelled in point of merit, and included in it are quite a number of animals which have won leading prizes in our shows. They are also exceptionally well bred, and are bound to be a big acquisition to the Clydesdale stock of Canada.

Mr. Vance has secured his lot in a district famous for about a century as one of the best horse-breeding areas in Scotland. The selections have been made by Mr. Vance direct from the breeders, and he is likely to have a good demand for his stock when he reaches home. At the Aberdeen Show, ten days ago, there was a remarkably good display of young stock, the greater proportion of which were got by the celebrated champion horse, Everlasting 11331, owned by Messrs. A. & W. Montgomery. Not for many years has so fine a display of really choice young horses and mares been seen in Aberdeen. The winning yearlings of both sexes were nearly all got by Everlasting, and this great horse, which won first at the H. & A. S. Shows three years in succession, seems likely to prove the most popular of all the sons of Baron's Pride in the breeding stud, as he has been in the show-ring. Another horse whose stock are doing well is Marmion, owned by Mr. Robert Park, Brunstane, Portobello.

We had a great show of Hackneys at London in the first week in March, and quite a large proportion of the prizes came north. The championship for the best group of three horses or mares in harness was won by Mr. W. Scott's Mathias, a very fine horse, whose dam was the champion mare, Ophelia, one of the very best mares ever seen at London, and certainly by far the best living and breeding mare in the Hackney breed to-day. Mathias was represented by four or five phenomenal harness horses. Menella, the champion harness animal of either sex, is owned by Mr. Scott, at Thomkome, Carlisle, Lanarkshire. She moves in a fashion almost unparalleled. Others got by him, and all brought out by Mr. Scott, were, Radiant, the first foal ever got by Mathias in Scotland; Bryony, which last year was sold for over £600 by public auction; Gay Mathias, a four-year-old horse which promises to break many records; and quite a number of others. The champion stallion, Diplomatist, is also owned in Scotland, by Mr. Iain Ramsay, of Kildalton. He was sold for £1,000, to go to Holland. Another Scots-bred female, Boquhan Sunrise, won the female junior championship. Altogether, it was a big day for Scotland.

"SCOTLAND YET."

The Bacon Hog Again.

Editor "The Farmer's Advocate":

The champions of the long lean hog (who a few years ago were filling the agricultural journals with the cry, "Buy, and buy only, the long hog. Never mind the other fellow's corns; let him cry out if he won't join in; he is a back number, anyway. Cut his hogs out of all prize-lists if possible, or get judges that will favor us every time. Instruct Institute speakers to give him a kick whenever possible") are finding out that "the worm when trodden on may turn." Whose corns are being pinched now? I noticed a letter in one of your late issues, "What kind of hog should we raise?" and the answer given, "Why, the long, lean hog, of course,"—as if that should settle the question for all time. Well, let that gentleman raise them; no one objects.

I see in your issue of March 22nd, D. C. Platt takes Mr. Harding to task for stating that the Chester White hog will make bacon easier and cheaper than the long, lean hog, in which statement Mr. R. Clarke, a breeder of Chester Whites for many years, also concurs; and which, allow me to say, I endorse. I think, without any egotism, that I know the feeling of as large a section of the country as any one farmer, and state that the long, lean-hog boom has been exploded. "He went up like a rocket, and came down like a stone." As this is probably the last time that I shall trouble you on the hog question, allow me to add a word with regard to the real value of our bacon exports. It is pointed out that many millions of dollars are brought into the country through sales of bacon. Does it never occur that our grain sales have correspondingly decreased?—for out of grain, and that only, can all these hogs be fitted. It costs—I speak from test and experience of 35 years—from \$4.50 to \$5.25 per cwt. (according to the prices of

grain) to make bacon out of various classes of hogs, so that there is not such a mint of money in the business after all; unless the prices paid for pork will more than compensate for the grain fed, time expended, etc. R. L. HOLDSWORTH, Northumberland Co., Ont.

A Study of Breeds of Swine.

HAMPSHIRE.

The Hampshire, until recently known as the "Thin-Rind," is the latest addition to the recognized pure breeds of swine in the United States, the American Thin-Rind Record Association not being organized until 1893, with about a dozen herds eligible for registration. According to the Secretary of the Association, the Hampshire traces to hogs brought from Hampshire, England, and hence the origin of their name. The name "Thin-Rind" was discarded and the name Hampshire adopted in 1904. The breed, as now known, originated in Kentucky, and the original hogs from which it sprung were taken to Kentucky from the Eastern States in 1835. Being a new breed, the Hampshire is not, as yet, very generally known, and there are no breeders of Hampshires in Canada.

According to Hon. H. F. Work, secretary of the Association, the general characteristics of the breed are: Head small; ears medium length, and slightly inclined forward; light jowl; broad back, of nearly uniform width, slightly arched; heavy hams; standing very erect on feet, with legs set well apart; active and muscular, denoting great carrying capacity, and devoid of excess of bone, jowl or belly.

According to some of its admirers, the Hampshire is of approved bacon type, but it will be seen that, with the exception of the head, jowl and belly, the above description does not very well accord with what is recognized as bacon type in Canada. There is no doubt, however, that the Hampshire is a useful hog in the United States, being active, hardy, thrifty and prolific, though the claim that they excel all other breeds in these respects must be accepted with a good deal of reservation. Mr. Work states: "In color, they



Hampshire or Thin-Rind Hogs.

In first-prize herd of Hampshires, at St. Louis Exposition, 1904.

are either listed or blacks, the most fashionable color consisting of black extremities, with a white belt from four to twelve inches wide, encircling the body and including the fore legs, which should also be white." The term listed means that the white belt is present. Among the disqualifications named in the standard of perfection for the breed is, "Color: spotted, or more than two-thirds white."

VICTORIAS.

Two American breeds of white swine bear the name of Victoria. One of these breeds originated in New York, and the other in Indiana. The Indiana breed has apparently made more progress than the other, and its interests are looked after by an association. It is claimed that four breeds were used in producing the Victorias, viz., the Berkshire, Poland-China, Chester White and Suffolk. They are not very widely distributed, though they are given classes at a number of State and County fairs. Very few representatives of this breed have been taken into Canada.

CHESHIRE.

The Cheshire breed of hogs had its origin in New York State, and was formed by crossing the Large Yorkshire and Suffolk upon the white hogs in the locality where they originated. Cheshires are bred principally in the Eastern States, but do not seem to be able to secure a place in the front ranks of American swine. Cheshires are a white breed, conforming, like the Victorias, to the fat type. They are a hardy, vigorous breed, and appear to be well adapted to the conditions prevailing in the Eastern States.

In the preparation of this series of articles on the principal breeds of swine, of which this is the last, we have been indebted to Prof. Thos. Shaw's excellent book, entitled, "A Study of Breeds," and to Prof. G. E. Day's very useful new book on swine, from which liberal extracts have been made.

The Economics of Beef Production.

Average production, average ability, average returns! Is the farmer a man of averages? The gospel of averages is circulated so widely in statistics, tables, reports, bulletins, that there is the breath of a challenge always in the air to meet the vendor of averages with a product that will shame him into silence. Intensive methods of cropping and of practice appeal to the farmer who thinks. Intensive methods alone can yield him a maximum return from his unit of capital, the acre. A discussion of these methods constitutes the economics of agriculture. A discussion of these methods, in their relation to the subject of cattle-feeding, constitutes the economics of beef production.

Exclusive grain farming in Ontario is no longer a dividend-paying business. No method of crop rotation or of soil cultivation will ever be able to preserve the fertility and productiveness of soil that is being depleted, year by year, of its plant-food elements through the sale of the crops off the farm. The supply of available plant food is not inexhaustible, and, as with reserve capital, repeated withdrawals leave the credit less. But, further, we hold it as a fact that exclusive grain farming is not the most intensive method of cropping practice or of farm management. In marketable products of matured cereals and legumes, an acre of land will yield smaller returns than it can be made to yield by skillful manipulation in the raising of root, silage and the other fodder crops for beef production. An acre of ordinarily good land may reasonably be depended upon to yield 28 bushels of wheat, 55 of oats, 25 of peas, 600 bushels of roots—mangels or turnips—or 15 tons of silage. Estimating wheat at 75c. per bushel, oats at 34c., peas at 60c., roots at 6c. per bushel, and silage at \$2.50 a ton, we have a return from the acre of land of \$21.00, \$18.70, \$15.00, \$36.00 and \$37.50 for these respective crops. Granted that the cost of labor in cultivating and harvesting materially lessens the marginal profits from root and silage crops, unquestionably the margin is still large enough to merit consideration. Further, returns from one acre of soiling crops in milk and butter production have been made to equal the returns from two or three acres of pasture. Partial soiling is a practice that may profitably be more generally adopted, and it relates itself well to intensive farming methods. Maximum returns from one acre of land—that must be our motto and watchword.

Contrasted with the grain farmer, stock-raising suggests the man who invests his money at compound interest. Improved fertility, through the return to the land of the manure from the stables, assures an increased income and yields promise of an addition to the capital account. Certain countries are particularly and perhaps solely adapted to the raising of grains and vegetable products. A large part of our country is primarily adapted to stock-raising, and responds less grudgingly to the farmer's toil when vegetable products are converted into meat on the farm. The world is slowly but surely being educated to more general meat consumption. China, Japan, even Great Britain, Germany and the United States are consuming more of meat products every year. Moderate meat consumption in the temperate zones relates itself naturally to existing climatic conditions, preserves the strength and sustains the vitality in bodily and mental exertion, and promotes vigorous, full-blooded, physical existence. Under the tropical sun the vegetarian's diet may be the more healthful one, but whenever the north wind blows, the temper of the citizen demands sterner nourishment. The business of beef-making in Canada is safeguarded by the economy of reason.

In beef production there is one safe point of departure, viz., the conversion of our farm-grown cereal and vegetable products into beef at reasonable market prices. To do this assures a living and marks the level of average achievement. The safety of this proposition lies in the fact that we reap a paying dividend in the harvest from the land, and maintain the soil fertility through the application of the farm manure, thus assuring an equal dividend for the coming year. We grant that it may cost more to produce a pound of beef on a market steer than can be realized for it when sold, but every pound of flesh added in finishing a steer enhances the whole value of the carcass. To illustrate: A 1,200-lb. steer is bought for 4½c. a lb., is fed for four months, gains 200 lbs., and is sold for 5½c. a lb. The steer costs originally \$51; the gain in weight, at 8c. a lb., costs \$16; the total cost is, therefore, \$67, and he is sold for \$73. The actual gain in weight costs 8c. a lb., and we receive only 5½c. a lb. for it; but for the 1,200 lbs., original weight, for which we paid 4½c. a lb., we now receive 5½c., and we realize on the transaction a profit of \$6.50. Thus, upon the increase in value of the original carcass, or upon the margin between buying and selling price, depends the profit in feeding cattle. The ability, then, to buy well and to sell well, and a thorough knowledge of the market, are indispensable qualifications of the successful cattle-feeder.

Another feature merits attention—that touching the cost of gain. Eight cents a pound is usually considered an average of cost. To illustrate that better than this can be done, may I cite two tests which have come under my notice. One lot of four steers, fed loose, weighing at beginning of test 1,200 lbs. each, during a period of 60 days, ate, besides roughness, an average of 7 1-3 lbs. of mixed meal per day, gained 2 1-3 lbs. a day each, at a cost per lb. gain during period of 6.34 cents. Another lot of seven, stall-fed, weighing at beginning 1,000 lbs. each, during a period of 28