

is true that large sections of country will never grow rape profitably, especially clays, and from these supplies may be purchased, but notwithstanding this, more attention must be given to the growth of pure and high grade or cross-bred sheep.

Scrub lambs will no more answer to fatten on rape than scrub cattle to fatten for export. It is therefore, a prime necessity to use only pure-bred sires and of the best quality, even in localities where rape may not be grown, as lambs for feeding will very extensively be drawn from such sections.

The supply of lambs may be largely supplied by those who grow the rape. They may keep a large flock of grade ewes and mate them with an excellent ram, and grow lambs of a prime quality much better than they can usually buy them. The price obtained for this class of lambs will, of course, depend upon the markets, but it will usually be at least one dollar per head more than for those purchased where they may be got.

Farmers with but small flocks may as well fatten their lambs on rape grown for them, as have any one else do this with them. There is no reason why they should not turn them off at \$6.00 per head, instead of \$3.00 to \$4.00, the averages now paid. One acre of rape grown in drills and properly cared for will fatten twelve lambs.

There is much difference of opinion thus far, as to the class of lambs most suitable for fattening on rape. On this important question we desire to express ourselves with the utmost caution, as even the most experienced in the work are not agreed as to which class of lambs are the most suitable. All are agreed that only lambs from a pure-bred sire will answer, but as to which breed there is no unanimity of opinion. What better work could the Ontario Experimental Farm take up than that of trying to solve this problem?

We visited the farm of Mr. James Laidlaw, Esq. M.P.P., at Guelph, about the middle of December last. Mr. Laidlaw had some 280 beautiful lambs of various crosses, and we looked at them with a critical eye, though we did not attempt to handle any. The Leicester grades were to us the most beautiful looking, owing to their symmetrical proportions. The Cotswolds were strong. The Shropshires were good and apparently compact, but the Oxford-Down crosses appeared uncommonly large. Whether this was owing to the fact that the wool may have drooped less than in the case of the Leicester and Cotswold, we cannot say, but they looked exceptionally fine. The Southdown crosses appeared small, but we were told they were "leady" little fellows. The probabilities are that sires from any of the pure mutton breeds will produce suitable lambs, but it will be ascertained after a time that some will be more suitable than others.

The snow was on the ground at the time of our visit. The lambs were then being kept in sheds from which they had access to a field, and were being fed oats, peas, and hay. The whole lot were shipped a few days after and averaged considerably more than six dollars per head.

Our advice to farmers is—look seriously into this question. If your land is suitable, grow some next season in a tentative way, for there are many little things about any crop that can only be learned perfectly by experience. If you don't succeed, try and ascertain the reason why, for what others have done in this direction you can do. If you do succeed, go into it more largely next year, as we are satisfied there is money in it. We also desire to ask the further favor that you will give the results of your

effort to the readers of THE JOURNAL after you have made the trial, for their future guidance. Be sure please and read carefully our paper in the farm department, and if you wish to learn anything more about rape culture, make your wants known in THE JOURNAL and we will be at your service.

### Raising Grades.

In deciding what breed to make use of in grading up his herd, the stockman should consider well the value of the male representatives of that breed for grading purposes. It is one thing for a breed to possess valuable characteristics as a breed, and it is another of perhaps more importance for the male members to be able to get good grades when used on animals of inferior breeding. The Shorthorn amongst cattle, the Thoroughbred amongst horses, the Leicester amongst sheep, the Yorkshire amongst pigs, perhaps illustrate this most forcibly. The Leicester sheep as pure breeds, do not meet the requirements of the mutton market, but the progeny of pure-bred rams on the ordinary grade ewes of the country, is such as to meet nearly all requirements. This is further shown in the case of light horses. For the raising of good strong drivers serviceable under all ordinary conditions, perhaps no breed will give a better cross upon the ordinary half breed Clydesdale mares of our country, than the Thoroughbred. The grades resulting being strong-bodied, clean, well-limbed, and with an abundance of ambition to go. In this case the grade would be far more serviceable than the pure-bred. Now, with the American Trotter, for instance, the reverse is the case, as the pure-bred and highly-bred individuals are the ones that make the best drivers in appearance and performance. This question is one that should receive the careful consideration of every stock-breeder, for on its true solution success more or less depends. To be able to come to a sound conclusion in a matter of this kind, the best method is to make a point of seeing some of the grades of the different breeds, noting carefully the sires and dams. It will be found after due observance, that some breeds give the best returns when kept pure, while the grades of others, it will be noted, surpass those purer bred.

### A Crack Shire Stallion.

Last month we gave our readers an illustration of a famous Clydesdale stallion, and this month we present an engraving of an equally famous Shire stallion, Prince William 3956 (for the original of which we are indebted to the *Live Stock Journal*, of London, England).

Prince William 3956, the property of Lord Wantage, K.C.B., Lockinge Wantage, Berks, whose stud he heads, is sired by William the Conqueror (2343), and out of a mare by Champion 457. He combines two of the best strains of Shire blood in England, and as a result his show yard career has been almost phenomenal. Foaled in 1883, he began by winning 1st at the London Show in 1884 as a yearling, where he was sold by his breeder, Mr. W. H. Potter, Lockington Grounds, Derby, to Mr. John Rowell, Bury Hunts, for 240 guineas. In 1885 he took 1st at London as a two-year-old, as well as two special cups, and the Elsenham Challenge Cup as the best animal in the show, and was again sold this time for 1,500 guineas to his present owner. By him he was again shown at London in 1886, when he took 1st in his class, being beaten for the Elsenham Cup only by his half-brother, the famous horse Staunton Hero, now five years old,

and like Prince William, a Derbyshire horse. In 1887 he was not shown. In 1888 he again won 1st in his class, the Elsenham Cup, another 50 guinea cup for the best stallion in the show; while last year, although not shown at London, he won at the Windsor show of the R. A. S. E. the Queen's gold medal for the best Shire stallion. It may also be noticed that the famous mare Blue Ruin, winner of 1st in her class last year and the year before at the London Shire Horse show, is a full sister to Prince William.

### Cotton Seed as a Food for Stock.

As a rule food can be grown more cheaply on the farm than it can be purchased, and when suitable varieties can be grown there, adapted to the wants of the stock man, this should always be done, all things being favorable to the adoption of such a course. But this must not be pressed too far, for it may so happen that the farmer has not sufficient ground available some particular season, to enable him to grow sufficient of some one kind of food for use that year. It may so happen that same year that that kind of food can be purchased cheaply. It would be unwise in the instance supposed for the farmer not to buy.

Again, he may have abundance of food in certain lines but not of all the kinds adapted to his purposes, while such foods, perhaps not grown in the country at all, can be purchased at reasonable prices. It is clearly his duty then to purchase these, but he should first have a very correct idea as to their worth.

Cotton seed is one of those foods. It has come into prominence only during recent years, but now its use is very extensive in the United States, and even in this country it is used in large quantities in the form of meal. It is not subject to duty and this has encouraged its use, as the price a Canadian pays for it more than a Southern, is the cost of carriage plus the dealers' charges here.

Until very recently no use whatever was made of the hull as a food, but now it is getting to be looked upon in the South as being of but little less value than hay. Although it is not probable that the hulls will ever be used in this country for food, it may be interesting to our readers to know something of its uses in the land where the cotton is grown. The seed is crushed along with the hull enclosing it, and the meal is separated from the hull by means of a system of sieves and screens. The hull when thus separated consists of fragments of seed-coats not exceeding one-fourth of an inch in diameter, a dark brown in color, tough and leather-like, and entangled in a mass of cotton fibres which the ginning process is unable to remove. Judging from its appearance it is about the last thing in the world that one would think of feeding to cattle or that cattle would think of eating. But we are told that they soon get fond of it, and that thousands of cattle are now fattened in the southern cities entirely on cotton seed meal and hulls, and that the same food is a favorite with the dairyman of the South. It has also been found useful in fattening sheep, but has not as yet been much tried in feeding horses or swine. The hulls cost \$2.50 to \$3 per ton in the mills at Memphis. Professor W. E. Stone, chemist at the Agricultural Experiment Station of Tennessee, to whose bulletin on this subject we are largely indebted for our information, gives the average ration of hulls as  $\frac{3}{4}$  lbs. and of meal  $\frac{1}{4}$  lbs. per day to a cattle beast of ordinary size.

The surprising feature is that the cotton fibre does not derange the digestive functions of the animal. A large number of experiments all point in this direction. No single instance has yet been cited in which death or even injury has resulted from this cause.