

say, that neither Oxford nor Shropshire rams should be put to ewes the progeny of which is intended to continue its kind.

Why not try a Hampshire, Messrs. Flockmasters? He is pure bred; he will stamp his character on your flock with remarkable force; the cross-bred lambs from common ewes by a Hampshire ram will generally be very uniformly of the Hampshire type, and, to judge from the reports of the great fat-shows in England, will be superior to the get of rams of any other breed.

*For instance*:—Smithfield Club, 1889: First and second prizes for cross-bred fat wethers were awarded to pens of the Hampshire and Oxford crossed; third prize and reserve to a pen of wethers Hampshire and Cotswold. And at Birmingham, the same year, it was just the same.

The following year, 1890, at the Smithfield Club: the well-known breeder, Wm. Coles, won the first prize for cross-breds with a splendid pen of wethers by a Hampshire ram out of Hampshire-Cotswold ewes, weighing, each, 314 lbs., and Mr. Sheringham took second prize with wethers from Hampshire ewes by an Oxford ram. And so it continues to day.

*Malt for milch cows*.—We observe in *Hoard* a letter from Professor Henry, of the Wisconsin Experiment Station, in reply to question as to the value of malt as a food for dairy-cows. Mr. Henry refers to the experiments of Lawes and Gilbert, of Rothamsted, which show that the malting of grain does not increase its food-value, so that there is no advantage in giving it to cattle over giving the grain in its original state. Of course, any one can see that the sweetness of malt must make it more palatable to stock than the raw barley. That being granted, let us see if we cannot devise a plan for making use of this quality without much loss.

Now, it is calculated by chemists that malt contains a certain principle called *diastase*, every pound of which is able to convert two thousand pounds of starch into gum and sugar, if properly treated. This treatment is simply to follow the process of brewing; that is to crush the malt and to steep it in water, at about 160° F., for 2 or 3

hours, by which time the conversion will be completed.

But the farmer cannot afford to use so costly a material as malt for the purpose of tempting the appetite of his cows. What, then, can he do to gain that end at a less costly price? He can do this: he can take, say, 50 lbs. of meal, corn, flour, etc., and mix it with a few gal'ons of water at 170° F., stirring the *mash* till the meal is thoroughly soaked, and then adding 5 lbs. of crushed malt, which must be well worked into the meal and water, when the whole is to be covered up with sacks, etc., and left to repose for a couple of hours; when cool, it may be given to the cattle, and not much of it will be left in the troughs. If any one has a doubt about the conversion of the starch of the raw grain in the mixture into gum and sugar by the *diastase* of the malt, tasting the mash will convince him of its certainty.

*Tuberculin*.—At the last meeting of the Ontario Shorthorn Breeders' Association, a good deal of contention arose as to the practice of testing cattle for tuberculosis by means of tuberculin. Mr. Richard Gibson, evidently a man of strong convictions, and one who is given to call a spade, asserted that the deterioration of shipping cattle, perceptible during the last 20 years, has been chiefly brought about by the application of the tuberculin test. The medical profession, he declared, had given up its use in the human family, and we should profit by their example. The most eminent specialists agree that in very few cases can it be applied without danger. If cattle are tested in England, they should not be re-tested on arrival in Canada. He believed that the injection of tuberculin is more likely to create disease than to stamp it out.

Mr. Hobson, of Guelph, utterly disagreed with Mr. Gibson. He had made a special study of the test, and having tested one of the largest herds in Canada, he knows that the facts are not as stated by Mr. Gibson.

Dr. Patten, whose name sounds to us as that of a homœopath, said that if he had a herd and knew it to be sound, he would not for thirty thousand dollars allow it to be tested!

However, after two of the members had expressed themselves strongly as to the influence exercised on this question by a mysterious individual