table on the central incisors show wider in front than at the back, showing a three-cornered surface. The tusks show the first sign of losing their sharpness at the point. A horse more than seven years old is commonly called aged and after this it is largely guess work although experienced veterinarians and horsemen, from careful observation, can guess very closely. A horse between eight and ten years of age has all the original markings on the teeth worn out and the enamel has gone on altering in shape so that in the central pair it is very small and round, and in the others only a little and a little less so from the centre to the outside. At ten years the enamel in the corner teeth will have become quite round or as nearly so as possible.

There are many other things which might be said but this will give those interested some idea upon which to commence to study the age of horses by their teeth. We urge farmers, and particularly young men, to pay attention to horses' teeth in order that they may become more familiar with the methods of ascertaining their age.

British Buyers Buying Here.

It has been announced in the daily press that the British authorities are now ready to buy army horses in Canada, and buying centers have been announced. Horsemen in Canada will welcome the chance to dispose of their surplus horses for the use of the army in defeating the Huns. We have not a list of the centers of buying. No doubt it will be advertised locally in every district. London is one. The Fair Grounds' Buildings are to be used for stabling previous to transportation.

LIVE STOCK.

A Lesson in Economics.

When a farmer sells his hay and grain from off the place he is marketing his labor and material to poor advantage. To say the least he is giving away a large amount of plant food, and as time goes on his labor will accomplish less because it must be expended on impoverished soil. Nothing but ultimate failure is in store for the agriculturist who will thus, year by year, allow the value of each hour's labor to diminish until the famished land gives back little in return. On the other hand the man who feeds live stock is manufacturing a finished article from a raw commodity, and he has the by-products (manure) still on the place. It is claimed that the profits earned by the magnificently-equipped abattoirs adjacent to the Union Stock Yards in Chicago came from the offal and other by-products, for they actually sell quarters and whole carcasses for less than the cost price of the animal and expense of butchering. The success of many institutions has been attributable to the masterful attention to details and the elimination of waste even of the smallest particle. Competition necessitated this economic improvement in manufacturing and commerce, but farmers have not yet mastered the art of controlling waste and selling their produce in the most highly finished condition, for competition does not excite the hard-worked man of many acres to combat obstacles such as these with detail and specialization. When men, sufficient to people a large nation, are under arms, destroying rather than constructing, is there not a great impetus to all farmers to make every bit of feed stuffs into something that is ready for the market and at the same time retain and so handle the by-products as to realize on them as well?

Canada has been prodigal like a young spendthrift, but the farming element has remained sane throughout a period of inflated land values and stupenduous borrowing. For half a century "The Farmer's Advocate" has preached live stock to the agricultural classes, and abjured them to heed not the false cry for money that led many to mine their fields by selling grain. Those counties of Ontario that are noted for years of stock farming are powerful proof that the doctrine was right, and they are a shining example of what our future policy should be. The conditions of all nations to-day are such that a demand is insured for live stock and live-stock products for many years to come, and any young farmer could not do better for himself or for those who will follow in his steps than to establish a herd or flock of well-bred animals. In conjunction with his efforts also should be a purpose, an aim, a goal; and all endeavors to reach that goal of his ambitions should be regulated by system and study. Canada must send large quantities of goods and produce abroad to pay interest on the money we owe. Throughout the last year when financial matters gave our Government some cause for worry the farmer was appealed to as the one source of succor. Upon his shoulders will bear the onus of relieving this country from financial burdens throughout the years to come and he will do it willingly, but in so doing he should operate with the most advantage to himself. That method will embrace a well-organized and whole-hearted system of live stock farming.

Studying the Fleece of Sheep.

Editor "The Farmer's Advocate":

No matter how well experienced we may be in animal husbandry, there is not one of us who cannot learn more by studying the stock on our own farms. Some men raise sheep year after year and never learn to tell the age of a sheep by its teeth. Few learn by the use of the scales what lambs should weigh at six or eight months or any definite age, nor how much a lamb should gain in a day or a week or a month. Hundreds of valuable lessons remain unlearned because we do not train ourselves to be close observers.

The fleece of a fine-wool sheep provides a most interesting and valuable study. Whether we are raising pure-breds or grades, it is well to know something about a fleece. It is not necessary that sheep be prize-winners or even show sheep for their fleeces to show all the characteristics worthy of study. By comparison of the fleeces of different sheep in the flock we can study density, length of staple, amount and character of oil, crimp and evenness. The more we study these points the more we will know about a fleece, the better we will know sheep, the more we will enjoy handling them and the more money we will be able to make from them. I will say that the man on the average farm who does not know by face every sheep in his flock and whose sheep do not know him cannot be accounted much of a sheepman.

Density is one of the most important points in a fleece for what it indicates—fineness and weight. Density and fineness vary with each other almost exactly. My way of determining density is to open the fleece at some natural division in the wool with both hands, palms down, fingers straight and close together, the hands perfectly flat against the fleece. In opening the fleece by this method the fibres of wool are laid out flat and a certain amount of "skin space" may be noted, or, in other words, a certain amount of skin. The denser the fleece the smaller this "skin space" will be, for the simple reason that in a dense fleece the fibres grow close together. Thus on opening a very fine fleece little skin can be revealed.

Another way to test density is this: With one hand, fingers tight together, gently endeavor to fill the palm with wool. The denser the fleece the fuller the palm feels. This method requires some practice, caution being necessary to exert the same pressure and to close the hand in the same way each time. Allowance must also be made for the hard surface in a very oily fleece.

The length of the fibres determines whether the wool is more suitable for combing or carding. To be good combing wool the fibres should be at least two inches in length. The longer fibres make the stronger cloth. In selecting samples for measuring, take from the same part of each fleece and cut the samples out. Don't pull them out. It hurts the sheep as much to have wool pulled out as it would hurt us to have hair pulled out of our head. A good length of fleece is desirable.

The ideal in oil is a soft, light yellow, the same the whole length of the fibre and in all parts of the fleece. A heavy yellow oil is not liked. A very faint greenish tinge in the light yellowish oil is much liked by some sheepmen. To test the amount of oil, take a small band of fibres and twist them hard with the fingers. In a well oiled fleece little drops of oil will stand out when this is done. An artificially oiled fleece will not show this, unless it is oiled to such a degree that the test is not necessary. The fibres of a dry, harsh fleece are brittle and liable to break.

Crimp refers to the wavy appearance of a fibre, which is caused by the thickening of the cortical layer, first on one side and then on the other. It is an indication of fineness—the closer the crimp the finer the fleece, as a rule. It is revealed beautifully in a very fine fleece by the use of a small hand magnifying glass, but can always be seen with the naked eye. In an extremely coarse fleece the waves may be a quarter of an inch or more in length, and so may be overlooked by an inexperienced man who has been looking at very fine fleeces. The crimp should be regular and close.

It is of great importance that the quality and quantity of the fleece be much the same in all parts. Sometimes the fleece may be of very high character on the shoulder, where the best wool is found, but extremely coarse and kempy on the flank, where the poorest wool generally is. Density, length of staple, oil and crimp should be carried evenly and to the same degree through the entire fleece, otherwise the fleece cannot be called high class.

Work through the fleeces of the flock many times and see how much information is just bound to be absorbed. Show the boy about these things, of which he probably never dreamed, and see his interest in sheep increase infinitely. And next spring give him a lamb, give him the money the lamb brings when sold, have him put the money in the bank in his own name, then he will be cemented to the farm, and you will have done yourself and the boy a world of good.

Johnson Co., Ill. W. H. UNDERWOOD.

Hog Cholera in Britain.

Following upon the exhaustive article on Hog Cholera, which appeared in our last week's issue, readers will peruse with interest the following conclusions and recommendations made by the Department Committee on Swine Fever in the Old Land as published in a recent issue of "The Farmer and Stockbreeder":

GENERAL CONCLUSIONS.

The continued prevalence af swine fever appears to be due principally to its highly contagious character, and the difficulty of its recognition by the pig owner in its early stages and in its milder forms.

To these causes must be added the difficulty of completely tracing the place of origin and the movement of pigs by which the disease has been spread.

The extirpation of the disease is practicable only by such drastic measures of slaughter as would involve a prohibitive outlay, and by such severe restrictions on movement as would be fatal to the industry of pig keeping.

Present circumstances, therefore, do not encourage the view that the extirpation of swine fever can be speedily accomplished or that such an objective should continue to be made the governing idea of administrative policy.

This conclusion, however, does not exclude the possibility that new preventive methods may bring about a condition of affairs more favorable to the prospect of eradicating the disease, and the study of such methods is being actively pursued.

RECOMMENDATIONS.

In view of all the evidence laid before them the Committee recommended:

1. That the attempt to extirpate the disease by general slaughter should be abandoned for the present.

2. That the immediate object of future policy should be:

(a) To reduce mortality from the disease.
(b) To control the spread of the disease.

3. That in order to reduce mortality, the use of protective serum without avoidable delay in infected herds should be encouraged by every possible means and in particular by facilitating the supply of serum.

4. That the production of immune herds by simultaneous administration of serum and virus should be undertaken when pig owners so desire, on premises selected as suitable and under careful supervision and restrictions.

5. That in order to control the spread of disease the isolation of infected premises should be maintained by restrictive regulations, but that such restrictions should allow of the introduction of infected premises of pigs to be treated immediately with serum.

6. That careful consideration should be given in the light of further experience to the extent to which existing general restrictions on movement may be relaxed as the result of new measures.

7. That in view of the experimental results above referred to the lapse of a short period of time may be relied upon for disinfection of premises, and should be regarded as preferable to chemical disinfection in the case of large quantities of manure, and of premises not readily capable of being disinfected by artificial means.

While the Committee submit the above recommendations based on the present state of knowledge, they are strongly impressed by the possibility of artificial vaccination as a method of combating swine fever.

They also recognize the advantages that might accrue from the discovery of a reliable diagnostic test for obscure cases and they therefore recommend that investigation into this and cognate matters should be actively continued.

At one time cows in certain parts of Europe were kept primarily for the manure. One would scarcely think it so valuable from the manner in which some allow it to waste. If you would grow good crops make and save manure.