

Examine the poll for poll evil.

Examine the neck for any signs of a strap having been used for wind-sucking; the jugular vein for evidence of having been bled. If this evidence exists, at once associate it with any other evidence which there may be of founder or of nervous or brain disease.

Examine the shoulders for fistula, sweeny and shoulder-joint concussion, or chronic sore shoulders from bad conformation.

Proceed down the fore legs and examine for any enlargement of the elbow joint or old scars denoting previous operation; the knees for enlargement or evidence of having fallen; the cannon bone for splints; the ligaments and tendons most carefully for any enlargements; the fetlock for sprain or bursal enlargements; the coronet for ringbone or sidebone; and then the foot for corns, quittor, founder sandcrack, quarter-crack, seedy-toe, canker, thrush, contracted feet and navicular disease. Compare the size and shape of the feet, and notice if shoes are of equal wear. Compare both fore limbs carefully for conformation, as well as for any enlargement.

Pass the hand over the back and loins to determine any irregularity in the bones of the spine, or for any signs of abnormal tenderness of the skin or muscles.

Then proceed to examine the hind quarters and limbs. Compare both hips, standing behind and passing the hand over the hip joints. Look out for drooping of the hip bone. Examine the tail and notice if there is anything abnormal. Frequently a shiver can be detected by suddenly forcing the tail upward.

Examine the anus for signs of worms; at the same time the genital organs.

Examine next the stifle joints, and compare one with the other.

The hocks must then be very carefully inspected for capped hock, curb, spavins of all kinds, thoroughpin, and for cracks or fissures of the skin in front of the joint.

Next examine the hind limbs for enlargements of ligaments or tendons, and the fetlock joints for bursal enlargements and thickening due to old sprain; the inside of the fetlock joints for what is commonly called brushing or interfering. Examine the pan of the heel for fissures, cracks and sores, constituting "scratches." Examine the feet for quittor, founder, thrush, sandcrack, quarter-crack, seedy toe, and canker. Compare inside of the hocks by standing in front and looking between the fore legs, and also by standing behind and by feeling with both hands on the off and on the near side. After this general manipulation, have the horse walked and trotted on level, soft and hard ground, and also, if possible, on uneven ground. Have this repeated until you are quite satisfied there is no lameness or imperfect action, such as stringout, etc. Back the horse, turn him sharply around to the left, and quickly back again to the right, in order to determine any chronic disease of spine or nervous system.

The next thing will be to have the horse saddled or harnessed, or put to drawing heavy loads, depending upon the character of the horse and the business for which he is intended. Examine under these conditions for action and lameness.

The next in order is to examine carefully for wind, by galloping or driving hard up hill, or by putting the animal to drawing a heavy load. In case of a young, unbroken horse, have him lunged by hand.

Examine for whistling, roaring or broken wind. Before doing this, it is as well to cause the animal to cough and make a pretense of striking the animal with a stick, in order to bring out the characteristic grunt or roaring, or the wheeze of broken wind.

After the examination of the wind, have the horse put back in the stable and remain perfectly quiet for fifteen to thirty minutes, if the patience of the owner will allow you that time. At any rate, allow the animal to get perfectly cool, and let it be brought out again and trotted up and down, both with the rider and without. Together with other evidence, this will generally settle the question of the presence or not of navicular disease, and it will also bring out latent lameness, in some cases of obscure bone spavin. It will, at the same time, test the permanency or not of cures of slight sprains. Take note of the general health and condition of the animal, and how it has stood the work given during the examination. If severe distress is noticed, coupled with an apparent high state of healthy conditions, look out for evidence of drugging, especially with strong alteratives, such as arsenic, very commonly used by unscrupulous dealers to produce an artificial appearance of good condition. After severe exercise, the evidence of arsenic will appear in a vivid red, and sometimes a blue, line along the gums, and also at times by severe diarrhoea, and abnormal thirst. The use of digitalis, in order to hide the incipient symptoms of broken wind, will be detected both before and after exertion, by an intermittent pulse. The use of cocaine, opium or morphine can be detected dur-

ing the examination by the abnormal, varying of the size of the pupil of the eye, and also occasionally by the breath after galloping.

The determinations as to whether any imperfection constitutes unsoundness must be governed by the purposes for which the animal is intended to be used.

LIVE STOCK

The most important points in feeding whey to calves are regularity, cleanliness, and no variation in quantity.

A calf which is being pail-fed, or even one which is getting whole milk from his dam, will usually drink considerable water if given an opportunity.

Buttermilk has been found, by actual experiment, to be less conducive to scours in calves than is skim milk, and some English authorities recommend its use up to one part in ten in the feeding of whole milk to calves being rushed for veal.

Experiments carried on at Kilmarnock show the value of whey to be two-thirds that of separated milk for bacon production, when used alone. It gave much better results, however, when used with meal, and corn meal was found to be the best food to accompany whey.

In dairy districts a question often arises as to the relative value of skim milk and whey for pig-feeding. In three experiments at the West of Scotland Agricultural College, Glasgow, the relative values of separated milk and whey were found to be approximately as 3:2. That is to say, the skim milk was found worth fifty per cent. more than whey for pig-feeding.

To prove that young animals make the most economical gains, experiments at the Wisconsin Station were carried on for some time, and the results showed a shoat weighing about 50 pounds, which was gaining about a pound per day, to be using only 18 per cent. of his food for work in the body (digestion, etc.), the remaining 82 per cent. going as increase in body weight. A 200-pound pig was found to require just 36 per cent. of his food to maintain his body, only 64 per cent. being left as bodily gain.

The exhibitor will do well to take success and defeat alike. The Shepherd's Journal gives some advice which every live-stock showman should consider carefully, when it says: "Don't be too hasty in condemning a judge because he does not happen to place the awards just the way you think they should be placed, for remember, experienced breeders and fanciers often disagree as to the relative merit of two animals that are nearly equal in quality, yet a judge is expected to 'make no mistakes' in placing his awards. The liability of a dozen fanciers to differ as to which is the better animal, is no excuse for the judge, should he make any mistake. He is expected by a certain class to be 'infallible,' when the fact is that he is human, the same as other men, and may make mistakes. A judge must be of a philosophical turn of mind, in order to meet the many conditions and phases of character found among exhibitors."

Value of Silage.

Silage keeps young stock thrifty and growing all winter.

It produces fat beef more cheaply than does dry feed.

It enables cows to produce milk and butter more economically.

Silage is more conveniently handled than dry fodder.

Waste of corn stalks is prevented, saving one-third the food value of the entire crop.

When silage is fed, the corn stalks do not bother in the manure.

Feed that would not otherwise be eaten will be made palatable by the silo.

A large number of animals may be maintained on a given number of acres.

It enables the farmer to preserve food which matures at a rainy time of the year, when drying would be almost impossible.

It is the most economical method of supplying feed to the stock during the hot, dry periods in summer, when the pasture is short.—[Missouri Farmers' Bulletin.

Make Use of Farm Roughage.

Roughage is one of the most valuable assets of the farm when it is properly utilized. The average farmer does not value it at anything like its true worth, and so is often easily induced to sell much of it to the disadvantage of himself and his land in the future. A recent bulletin, published by the Indiana Experiment Station, says, one of the greatest losses of the farm is due to the lack of proper utilization of roughage incidental to grain production.

There are produced upon the farm large quantities of rough feeds that do not bring, on the market, prices to justify the removal of such quantities of plant food as of necessity accompanies the sale of such products. Therefore, one of the greatest problems to be solved in successful farm management is the disposal of the roughage produced on the farm in such a way as to secure the feeding value, and at the same time conserve the plant food therein contained. It is impossible to produce grain without also producing large amounts of roughage. Since cattle are pre-eminently the most satisfactory animals to consume large quantities of roughage, the solution of the roughage problem lies largely with this class of stock, and with it rests the real value of the roughage grown on the farm. Cattle-feeding is coming more and more to be considered as a means of marketing grain, conserving soil fertility, and completely utilizing the roughage produced on the farm, rather than a means of commercial speculation.

The use and value of clover hay is pretty well recognized and understood, but the use and value of the cornstalk is neither understood nor appreciated. It has long been known that the stalks contain a very large percentage of the food nutrients of the corn plant. When harvested to preserve the grain only, the stalks, either standing or as corn stover, while containing the food nutrients, have them locked in such a way with woody fibre that they are not readily available for animals. The woody parts are not only unpalatable, but when eaten, require so much energy in digestion that a large part of their value is lost. When harvested, by putting the entire plant into the silo, the plant passes through a process of fermentation that leaves the hard parts of the stalk soft and palatable, and the general effect of summer grass is secured in winter by feeding the corn silage. When fed in the form of silage, the entire corn plant is consumed.

In the experiments at the Indiana Station, it was found that corn silage was a more economical and more profitable roughage than clover hay alone for fattening cattle. Addition of silage to a ration of shelled corn, cottonseed meal and clover hay decreased the consumption of shelled corn in amounts closely approximating the grain content of the silage in the ration. Addition of silage to a ration of shelled corn, cottonseed meal and clover hay increased the rate and decreased the cost of gain, and finished the cattle equally well. Silage added to a ration of shelled corn, cottonseed meal and clover hay increased the profits per steer in amounts closely corresponding to the saving in cost of gains.

The substitution of corn silage for clover hay with grain rations of corn and cottonseed meal did not affect the rate of gain, but did greatly reduce the cost of gain. Corn silage alone as a roughage, with a grain ration of shelled corn and cottonseed meal, gave slightly less finish than clover hay alone as a roughage, but the cost of gains was enough less to return a much larger profit where silage was the only roughage fed. The more nearly corn silage replaced the clover hay in the ration, the cheaper the gain, but the entire elimination of clover hay from the ration was accompanied by slightly less finish on the cattle.

Under prevailing market conditions, the larger the proportion of corn silage in the roughage, in the early part of the fattening period, the cheaper were the gains. To induce sufficient grain consumption to insure satisfactory gains, it was necessary to limit the amount of silage fed during the latter part of the feeding period. Corn silage in the ration produced relatively more rapid improvement in the condition of the cattle during the early part of the fattening period than did clover hay alone as roughage. The consumption of frozen silage scoured the cattle.

The results in general "indicate very strongly that the more nearly the clover hay is replaced by corn silage, the greater is the reduction in the cost of making gains, but that, for the latter half of the feeding period, the roughage must be limited to such amounts that enough grain will be eaten to return satisfactory gains. Otherwise,