

the determination of all classes here to live more or less luxuriously and not in the Spartan fashion of their forefathers, may explain many things. Certain it is that departments of agriculture like butter, dairying and horse-breeding, in which some of our rivals seem to thrive, are pursued here at a loss. The situation is puzzling. My own opinion is that the traffic in strong drink is throttling this country. Yet, at present a measure is being forced through the House of Commons to endow the traffic. It is the most humiliating spectacle the British Parliament has ever witnessed.

"SCOTLAND YET."

Registration of Shorthorn Cows and Produce.

In the annual report of the Shorthorn Society reference is made to a suggestion by a member, that, with the view of reducing the size of the volume of the Herdbook, cows on their first entry with produce should have their full pedigrees given or obtainable in that volume; but that in their subsequent entry, with further produce, the pedigree should be given as far as the dam only, with a reference to the first entry. This suggestion was referred by the council to a committee for consideration and report. The committee, after considering proofs of a portion of the last volume, printed in accordance with the above suggestion, and also in other forms, reported: that the amount of space that would be saved by the adoption of the suggestion would not be sufficient to justify an alteration, which would mean the partial abandonment of the present system of giving every pedigree (by abbreviation one to another) complete in each volume; but should the size of the volume continue to increase and compel the adoption of a new system, the most likely arrangement appeared to the committee to be that of giving the entries of the cow calves in the same form as the pedigrees of the bulls are now given—i. e., one entry—and not as at present as produce and then later as a dam, an arrangement which would allow of a considerable saving in space and the continuance of the present system of each volume being complete in itself.—[Live-stock Journal.

HORSES.

Buying a Horse.

It behooves a farmer to have his eyes open and clear when he goes to buy a new horse or team that will give him good service and prove good value for the price paid.

There are said to be tricks in the horse-dealing business, but whether that be true or not, it is certainly important for the would-be purchaser to understand what he wants, what the work to be done requires, and what constitutes a sound, serviceable horse for the place to be filled. It is also absolutely necessary to consider every horse unsound, until proved the contrary, no matter from whom he is to be purchased. Friends and relatives, when it comes to a horse deal, are to be considered the same as strangers until the business has been completed. Even the deacon is not to be given any credit unless the horse he has to sell corroborates in appearance and performance the qualities he claims for him. There is to be no sentiment in the matter—simply business sense.

For the above reasons, when the neighbor has a horse for sale, and our reader goes to inspect the animal, he should go unawares, if possible, and see the horse, first in the stall, and afterwards in action. This is necessary for the reason that when a horse is at rest in his stall some things will show up that would disappear when he is trotted, or be overlooked were he first seen out of doors. For instance, when looking at a horse in his stall the flanks should be watched for abdominal breathing, indicating "heaves"—a trouble often temporarily alleviated by drugs when the visit of the intending purchaser has been anticipated, and at the same time a glance will show whether a strap is buckled tightly around the neck back of the ears, indicating that the horse is a "wind sucker."

We next step up beside the horse and examine the manger, which is always chewed a great deal if the animal is a "cribber," and, finding such evidences, it is but a moment's work to open the mouth and find if the incisor teeth corroborate the suspicion. Next the horse is made "stand over" in his stall. If he has a spavin and is lame from it he will jerk the affected leg as he steps, and this may also be done as an evidence of "chorea" (shivers or crampiness). The latter disease, which is incurable, is still better seen as the animal is made to back out of the stall. For the first few steps the hind legs will be jerked higher than normal, but when he is trotted, or even walked, there may not be a trace of this unsoundness to be seen, except, possibly, when he is suddenly turned.

After the "at rest" examination he should be placed on a level floor. Watch him for a few minutes, and if he is sore-footed, the foot that causes pain will be stuck out in front of him, or the hind feet will be eased turn about persistently. Walk around him and form a general idea of his

shape and quality and suitability in size, weight and bone. If all of these things are satisfactory, next have him walked and trotted, and note his gait, with any departures from normal, free, open or sound action.

If he stands these tests, the serious examination commences, and this must be a most critical one if the price asked indicates a valuable animal and absolutely sound. If a cheap horse, and only sold "serviceably sound," the examination need only be for wind and lameness, and then a search for anything that will be likely to make him useless, either temporarily, during busy seasons, or permanently, at once, or in the near future.

Commence at the head, and examine the teeth for age; parrot mouth, which makes a horse unable to graze; diseased molars, which are indicated by foul odor; discharge from the nostrils or a wad of food in the cheek; injured bars where the bit presses on the floor of the mouth; lacerated tongue or ulcerated tongue and gums. Glance at the nostrils for discharge, red spots, ulcers or tumors in the false nostril. Now test the sight by slightly lifting the hand as if to strike the eye, which will make him wink if he can see. Look at the eye and the lids. Where a horse has had several attacks of periodic ophthalmia (moon blindness) the lids will be wrinkled and a bluish tinge appear over the eye, or irregularity of the contour of the cornea, while white spots may tell of cataract or merely of injuries that have not affected the eyesight. Examine the bones of the lower jaw for departures from normal, also those of the face under the eyes for enlargements, possibly showing disease of molar teeth or chronic catarrh.

Abscesses under the jaw will be easily found if present, and indicate "strangles" in quite young horses, but are suspicious in old ones, indicating diseased molar teeth, and possibly something worse. The hand is run over the poll, where "poll evil" is located; under the mane for skin disease; along the jugular groove and at the throat-latch for abnormalities. Then the withers are examined for "fistula" or sores, and the shoulder for sweeney, collar boils or fibroid tumors, and the elbow for "shoe boil." The fore limb is next examined carefully for broken knees, splints, bowed tendons, grease or scratches, and any other things that depart from sound condition. The foot has to be examined very carefully for departures from good shape, founder, thrush, corns, quarter cracks, quittor, sand crack, ringbones, sidebones and nail prick or stone bruise.

Never accept a horse with leather sole on foot. Have him unshod before deciding that there is nothing wrong. This applies to fore and hind feet, and, as a general rule, it is safest to have the shoes removed where the horse is valuable. The body is next looked at carefully for ruptures, sore back, weak back, sagged back and waxy coupling. The state of the scrotum is to be looked to in geldings, and the udder in mares. Lift the tail to see if it is strong, not false, and not newly docked or affected with melanosis tumors in white animals. At the same time the anus is inspected and the vulva in mares. Paralysis of the anus is not uncommon, and lacerations of the perineum in mares constitute a "gill flirt." The hind limb is next to be gone over for unsoundness similar to those in the fore limb, including spavin, ringbone, thoroughpin, etc., while the stifle will come in for a careful look and the contour of the hips be noted for injury to the points of the ilium caused by running in at a narrow door.

Next test the animal thoroughly for wind, and the work will be fairly complete. In conclusion, it may be added that each limb must be examined in succession as above advised.—Dr. A. S. Alexander, Wisconsin Experiment Station.

Horses in the Transvaal.

Writing in the Transvaal Agricultural Journal, Col. John Hotham, of the Royal Artillery, makes some remarks on the types of horses suitable for South Africa, based on his long experience in the breeding and use of English, Indian, Australian and other horses. Of the Arab he says, there is no other horse "so generous, so hardy, so full of pluck and so staunch as the true child of the desert, and none that will do so well on poor and indifferent food at a pinch. By crossing him with the best country mares," he adds, "we shall thus get dense bone, good constitutions, good sound feet, endurance and pluck. Having got the Arab blood into the first cross by using well-selected, short-coupled thoroughbred horses of from 15 h. 2 in. to 15 h. 3 in. with the best of the young mares, we shall get more substance and size." For the breeding of artillery and draft horses, however, Colonel Hotham thinks there are no horses so likely to suit the Transvaal as the Cleveland Bay and the Yorkshire Coach horse. Such heavy horses as the Shire or the Clydesdale, he does not consider suitable for South Africa, and he describes the Hackney as too soft for that part of the world.

We are very much pleased with the change to a weekly, and think it is the best farmer's paper going. Ontario Co., Ont. ISAAC LEMON.

FARM.

Clover Sod.

By Prof. O. A. Zavitz.

Clover is one of Ontario's most valuable farm crops. It is generally recognized by Ontario farmers to be a heavy yielder of hay which furnishes a large amount of valuable food constituents. Its beneficial effects upon the soil, however, do not seem to be so clearly understood. Scientists who have made a careful study of the influence of clover on the soil, tell us that after large crops have been removed from the land the soil is actually richer in nitrogen after growing clover than it was before, owing to the large amount of nitrogen which the clover roots have obtained from the air. As a rule, farmers grow clover and timothy together, and are therefore unable to ascertain the comparative influence of each of these crops on the soil.

We have conducted a series of experiments at the Agricultural College, Guelph, on three different occasions, in order to ascertain the comparative value of clover and grass sod for crop production. We first grew clovers and grasses upon separate plots and removed the crops, after which the land was plowed and other crops were sown. The results, therefore, show the influence of the roots remaining in the soil upon the productiveness of crops following the clovers and the grasses. In 1902 barley was sown after each of four varieties of clovers and three varieties of grasses in four different places in our experimental grounds. The average results of the four tests in pounds of barley per acre were as follows: red clover, 1,516; lucerne, 1,450; alsike clover, 1,427; mammoth red clover, 1,408; meadow fescue grass, 1,068; orchard grass, 1,015; and timothy 946. It will therefore be seen that the red clover sod gave an increase over the timothy sod of 570 pounds or nearly twelve bushels per acre.

In another experiment, which was completed in 1900, in which winter wheat was sown on both clover and grass sods, it was found that an average of 3,194 lbs. of wheat per acre was obtained from the clover sod, and only 2,300 pounds from the grass sod.

In 1899 a mixture of barley and oats was sown on clover sod and also on grass sod. The results were very marked, as an average of 2,256 pounds of mixed grains per acre was obtained from the clover sod, and only 1,078 pounds of mixed grains per acre from the grass sod.

By averaging the results of these three grains, we find that the crop grown on the clover sod gave an increase over the crop grown on the grass sod by fully 56 per cent.

The results of these experiments help us to appreciate the beneficial influence on the soil from growing clover. It also indicates the suitability of a properly cultivated clover sod as a preparation for winter wheat or for spring grains.

The Seed-growers' Association to be Incorporated.

Hon. Sidney Fisher has introduced a bill into the House at Ottawa to incorporate the Seed-growers' Associations. The object of the bill is to authorize the formation of associations of seed-growers similar to the live-stock associations, with a central executive, and branch associations throughout the whole of Canada.

The constitution, by-laws and rules of the Association shall provide for:

- (a.) The registration of the history of selected seeds for use in the production of one or more kinds of field or garden crops;
- (b.) The admission, suspension and expulsion of members;
- (c.) The election of officers and their duties;
- (d.) The mode of convening annual, general and special meetings;
- (e.) The audit of accounts.
- (f.) The location of the head office and the branch offices, if any.

The objects of the association shall be to keep records of the history of selected seeds of certain plants, and to collect, publish and preserve valuable data concerning those plants.

Top Dressing for Pasture.

A subscriber who runs a small dairy farm asks what he should use for a top-dressing upon an old pasture, and asks how land plaster (gypsum) would do. The best top-dressing for such land would be a light application of the manure from the dairy cows, as it would supply the grass with just the food it requires, and in about the necessary proportions. The manure should be spread thinly and even in the late fall or winter, and harrowed in the spring once or twice. Before harrowing, a seeding with white clover, red-top and blue-grass seed would renew the crop. If it is desired to get some improvement at once, and no manure is available, an application of sodium nitrate, about one hundred and fifty pounds per acre, obtained from most hardware merchants, would give a quick growth. To sow such small amounts the nitrate should be mixed with road dust or dry loam. Gypsum or sulphate of lime does not supply the elements of plant food