

Technical and Bibliographic Notes / Notes techniques et bibliographiques

Canadiana.org has attempted to obtain the best copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

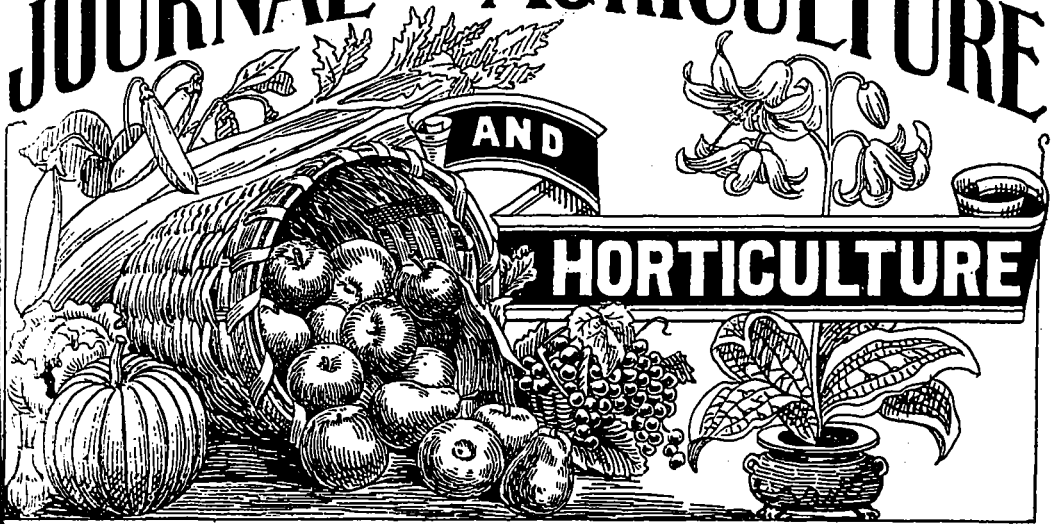
Canadiana.org a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured covers /
Couverture de couleur
- Covers damaged /
Couverture endommagée
- Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée
- Cover title missing /
Le titre de couverture manque
- Coloured maps /
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur
- Bound with other material /
Relié avec d'autres documents
- Only edition available /
Seule édition disponible
- Tight binding may cause shadows or distortion
along interior margin / La reliure serrée peut
causer de l'ombre ou de la distorsion le long de la
marge intérieure.
- Additional comments /
Commentaires supplémentaires:

Continuous pagination.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /
Qualité inégale de l'impression
- Includes supplementary materials /
Comprend du matériel supplémentaire
- Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées.

THE JOURNAL OF AGRICULTURE



VOL. I. No. 5.

This Journal replaces the former "Journal of Agriculture," and is delivered free to all members of Farmers' Clubs.

MARCH 1, 1898.

Competition of Agricultural Merit, 1897.

Inspection of the Farms entered.

No 2: H. R. MOONEY.

On the 8th of August, we inspected the farm of Mr. H. R. Mooney, of Inverness, Megantic, which comprises 400 acres, 250 of which are in cultivation, the remainder being in bush. The soil is partly alluvial, partly hard-wood loam.

The system of cultivation pursued by Mr. Mooney is not *rotative* exactly, its aim being to fatten cattle for the export-trade, and there are only 7 arpents in hoed crops. Still, we gave him full marks for his farming seeing that he gives all his meadows a full coat of dung every fall, and breaks them up frequently, in spite of his land being of excellent quality. The almost entire absence of weeds proves the truth of what we have just advanced.

The house is well arranged, and the buildings in general roomy and very suitable to the purpose for which they were built. Mr. Mooney is delighted with his large silo.

Management, generally speaking, good, and the books better kept than in 1892. We are persuaded that Mr. Mooney would keep perfect accounts if he had a regular set of books arranged for the purpose.

For his fat leasts we gave 13 out of 15 marks. They number 50 head and very fine they are. The milch-cows, too, are very good, and we think Mr. Mooney is quite right to turn his attention seriously in future to dairying.

The crops were: 5 arpents of barley, 20 of oats, $1\frac{1}{2}$ of buckwheat, $\frac{1}{2}$ of beans, $2\frac{1}{2}$ of swedes, 1 of potatoes, $2\frac{1}{2}$ of maize (various) for experiments, 85 of splendid meadow, and 150 of very rich pasture, well supplied with water.

A good garden and some bees complete the tale.

Mr. Mooney is what is styled a "gentleman-farmer," living on his fine property, surrounded by his family all of whom have been carefully brought up. His good wife has had her share in bringing about the prosperity and happiness of the household.

We assigned to Mr. Mooney 93.70 marks, and offer him our sincere congratulations.

NO 3 : REMI BELLES ISLES.

October 5th : To-day we visited, at St Fabien de Rimouski, M. Rémi de Belles-Isles' farm, 160 arpents in extent, 125 of which are in cultivation, 5 in permanent pasture, and 30 in sugar-bush, etc.

M. Belles-Isles could not obtain full marks for his system of farming, on account of the paucity of his hoe crops, and the want of cleanness of his land.

Still, there was one head of cattle to every 3 arpents, and as he takes great care of his dung, we trust the farm will be kept well in heart.

The barn, as are the other buildings, is very well planned. The sheep-shed is the best we ever saw, and the piggery, too, under which is a dung-pit that receives all the drainage, washing-water, etc., from the house. From time to time, loads of earth are thrown into this receptacle, and have a very good effect. (1)

Fences straight and well made ; but the division of the farm might be improved.

About 6,000 loads of stones have been carted off the land, but only partially utilised. There have been 2 arpents of drains laid down.

A fortunate provision of $4\frac{1}{2}$ arpents of green-fodder aided the pasture, which had suffered a little from the weather of last spring.

On this estate, clover, timothy, and flax are grown for seed. M. Belles-Isles' marks amount to 89.25.

NO 4 : LOUIS KIROUACK.

On July 27th, we visited M. Louis Kirouack's farm, at St Médard de Warwick. As this figured in our report of the 1892 competition, we refer our readers to that brochure, to which we have nothing to add. M. Kirouack has devoted himself since that time more to the establishment of his sons in advantageous positions than to additional improvements on his farm. We assigned 87.55 marks to M. Kirouack.

NO 5 : LS.-CIRICE BELLES-ISLES.

This farm is 105 arpents in extent, and when we visited it on the 2nd October, we found on it one head of cattle to every $3\frac{1}{2}$ arpents. Great care is taken of the dung, which enables the farmer to pursue a fairly regular rotation.

By the large table annexed to this report, it will be seen that the farmer here pays much attention to permanent improvements, as he has carted off his land no fewer than 6,000 loads of stones, which he has employed in drainage and in making good fences.

We lay great stress upon this point, as, in this part of the province, nothing is more commonly met with than little heaps of stones chucked down here and there, all over the farm, which is almost entirely covered by them. We hope his neighbours will follow M. Belles-Isles example : 85 marks. (*From the French.*)

(1) Far better to pump the liquid over the earth. *Ed.*



Notes by the Way.

Retgression. — It seems almost incredible, but from the report of Mr. Bowick, the well known English correspondent of the "Country Gentleman," we learn that the Canadian system of Cheddar cheese-making, adopted in Scotland some twelve years ago, has been found not to answer the purpose, and cheese-makers all over the country have returned to the old Somersetshire system, namely, to create the required acidity by adding sour milk or whey, instead of, as in Canada, by heating the milk. Discolouration seems to have been the chief fault found of late with the Scottish Cheddar, and it is supposed to have been caused by the heating process. In some dairies in Scotland, a pure culture from the States has been used, and it was with this that the first-prize cheese at the Kilmarnock Exhibition, last fall, was made.

Lime-burning. — To burn limestone, of which there is plenty about this province, there is no absolute necessity of building a kiln. We have lots of rough fuel on most of our farms, and a little straw to start the fire, can easily be spared; will any one try the following plan, which we know has been successful:

Mark out a square the size of the base of the pyramidal heap you intend to burn; on this place a good layer of straw, then a lot of rough brush wood, sticks, etc., topped up with some good billets of hard-wood. A sort of flue must be made from the centre to the outside, on the ground, of large limbs of trees, to get all well alight. Then place alternate layers of limestone and stove-length hard-wood, and when high enough, cover all up with soil. When alight, care must be taken to stop up any cracks that may appear, or else the whole force of the fire will be directed to that quarter and the fire will go out. This is very much the same plan as that practised in "clay-burning" that we have so often recommended as a'mendment on heavy land, and will, if carefully done, burn lime for a mere trifle. We do not mean to say that the whole charge will be as perfectly burnt as with coal in a kiln; but even if a odd stone or two does escape, it will fall to pieces as soon as the frost gets hold of it.

Vacant farms in New-England. — In the "New-England Homestead", we read that there are no fewer than 4,300 farms in that division of the States that are completely abandoned and are fast returning to the same condition from which they were rescued by the industry and persistent energy of the early settlers.

And are these farms to lie perennially in their present state? Will nobody try to do what is called, we believe, by the New-York papers "resurrect" them? It would not be an expensive task. Three or four of them laid together, making, say, 500 acres; a good flock of lambs; a skilled shepherd; a few tons of bone-dust, and a few hundred pounds of rape-seed; with two or three plough-teams and men in proportion; these, if properly employed, would soon convert these eyesores into really profitable occupations.

And, dropping the subject of the abandoned farms in the States for a time, may we not turn our eyes to many a farm in this province that is hardly more productive? The same treatment that would rescue the former from barrenness, would greatly assist in multiplying the returns from the latter. No one who has not seen, with his own eyes, the marvels effected by the feeding off of only one crop of rape by sheep, would believe the utter and entire change of power of production it brings about. Do, try it, some of you; you will never repent it. The time has come to consider whether, considering the competition in arms against us, it might not be as well to turn our attention seriously to the other branches of farming, and to see if we cannot bring them to the same pitch of perfection as we have brought our dairy-industry to. There are plenty of lambs to be picked up round the country; for we cannot begin the system we are advocating by keeping a breeding-flock, and

8 or 10 weeks on rape, with a trifle of clover-chaff, oats, and pease, will put a good dollar's worth of meat on a lamb in moderate condition, and the following crops of grain and hay will completely open your eyes to the invaluable effects of not only "the sheeps' feet," which are said "to be golden", but also to the economical distribution of their cogent manure, the whole of which, both liquid and solid, will be found, after the sheep have fed off a plot, to be spread all over the piece with a nicety of equalisation that the best "field-worker" in Scotland could not equal.

The Dairy.

A DANISH DAIRY FARM

Mr. Lloyd Baker, a Gloucestershire landed proprietor, has been visiting the dairy farms of Denmark. We give here a description of one of them:

The first farm they visited was that occupied by Mrs. Fabricius, at Charlottendal, near Slagelse, which was considered, by one dealer at least, to produce the best butter in Denmark. That farm consisted of 750 acres of arable land, somewhat sandy; the crops looked well, but the land was considered rather poor for Zealand. The rent, with the taxes paid by the tenant, came to just £1,000 for the previous year, or £1 6s. 8d. per acre. About £450 was fixed rent, while the remainder varied with the price of corn and butter, and was, therefore, lower than usual. All the repairs were done by the tenant, and the whole of the stock and implements were the occupier's property (which was not always the case in Denmark). Mrs. Fabricius was a widow, and, with the aid of a capable bailiff, was carrying on the farm successfully. The farm buildings were large and handsome, and included stalls for 200 cattle. There were 160 milking cows of the usual Danish breed—red or brown in colour and shaped like the Dutch cows, but were not so large, and were evidently bred entirely for milk, and some of them were provided with jackets of canvass as a protection against flies and cold. No fat stock were kept, but the old cows were fatted for a time and were then sent to Germany to be made into sausages (laughter). During the summer the cows were all tethered on the clover; Mr. Lloyd Baker saw them on the second crop, the first having been cut for hay. Two men were employed entirely in moving the tethered cows, which were changed five times a day, and one man's time was occupied in taking them to water—the three men foddered them in winter in the houses. The milking began at four o'clock, morning and evening, and eight Swedish milkmaids were employed, being about one to every 20 cows of the herd; one woman could milk 18 cows twice a day. Formerly those girls did some other work in addition to the milking, but now they refuse to do so, and were, therefore, occupied five hours only out of the 24. A milkmaid's wages were £6 15s. per annum, with board and lodging, and the keep of a servant was estimated at £12 a year. The cowmen received £11 5s. a year and board and lodging. The married men received £25 per annum with a cottage and garden worth £3, and light beer and skim milk. Sixteen men and thirty horses were employed for working the land, extra hands being engaged for harvest. The cows had hitherto calved in December, January, and February, but now there was a tendency to bring them in during April or May, as the winter price of butter was not much in advance of the summer price, and it was naturally cheaper to feed for milk during the summer. A great part, if not all, of the oats and barley grown was used for feeding stock; and as the wheat and rye were consumed in the house, the price of corn did not affect the farmer.

DAIRYING: ITS PROFITS

Compton Model-Farm.

Dairying is to-day almost the only profitable line of business left to the farmer in nearly every part of the country.

Thousands of farmers are struggling on in other lines, unable to make a decent living, but persistently refusing to get out of the old rut and go to making money as they may easily do if they would. It is hoped that these lines may be read by many such, but it is feared that only a small percentage will have the necessary energy and ambition to profit by them. I am sorry to say this, but my observations in the past compel it. Why it should be so I cannot understand, for there are thousands of examples before any one who will look them up, of prosperous dairy farmers who, before they adopted that line of business, were unable to save one dollar from year to year. In some districts whole communities of rich dairy farmers can be pointed to whom, ten to twelve years ago, not only did not, but could not, own a herd of cows, and the greatest things which grew on their farms were mortgages. Dairying and prosperity, in the communities to which I refer, were brought about through the agency of the cooperative creamery, but just as profitable and even more so, in many cases is the private dairy when fitted out with proper appliances.

1st. J. W. Newton says: "The first advantage of dairying is that it takes less fertility from the soil than other branches of farming, sugar-making alone excepted."

This is not generally known among farmers.

Authorities differ, but the following figures are approximately correct, round numbers being given. A ton of each product mentioned below takes fertilizing material from the soil as indicated by the figures:

Hay.....	\$ 6.00
Clover.....	9.00
Potatoes.....	2.00
Oats.....	7.50
Corn.....	6.00
Wheat.....	7.00
Fat Oxen.....	12.00
Milk.....	2.50
Cheese.....	21.00
Butter.....	50

A ton of oats takes seven dollars and a half out of the farm and sells for less than sixteen dollars. A ton of butter takes fifty cents worth of plant food from the farm and sells for from three hundred to five hundred dollars. Comment is needless.

2nd. Butter is a condensed product. Nothing can be made or grown on the farm which brings so much per pound. Farms remote from markets, and communities far from railroads, can send butter from the farm or creamery with the least possible expense. Hardly any other farm product can be loaded, a hundred to a thousand dollars worth at a time, upon a wagon and drawn to a shipping point so readily as can butter. The dairyman can condense tons of fodder and crops grown on the farm into dairy products and send them to market in compact and portable form.

3rd. Butter is a finished product. It is made ready for the consumer either in the private dairy or local factory or creamery.

4th Dairying brings in a constant income. The man who sells crops of any kind has to wait until he can market his products once a year. There is little satisfaction in this. It is unbusinesslike to go without cash fifty-one weeks and then have a lot of money come in at one time. The dairyman has an income nearly or quite fifty-two weeks in the year.

5th Dairying gives constant remunerative employment. The grain or potato grower

must spend a large part of the year in enforced and demoralizing idleness, but the dairyman finds profitable work throughout the year, and his work is most profitable in the winter time.

6th. On the dairy farm the work is better divided. Especially in winter dairying, there is a let up in the dairy work at the busiest season of the year on the farm, while the dairy needs the most work when other farm work is lightest.

7th. Skill and brain work get better pay in dairying than in any other branch of farming. To produce fine dairy products requires something besides hardwork. The dairyman must have knowledge and skill and exercise great care. These are required in breeding and feeding dairy cows, and in handling dairy products. And the care bestowed and the skill exercised get pay in hard cash as they do in no other branch of farming.

8th. There is more room at the top, greater opportunity to improve than in any other farm work. Cows produce from 150 to 500 lbs. of butter per year, and butter sells from ten cents to fifty cents per pound. No other branch of agriculture shows anything like this, or gives such a chance to rise.

9th. Take the country through, there is no kind of farm work so well suited to women as dairying.

10th. Dairying leads to thoughtfulness for the comfort of animals and thus tends to morality. To do her best, the cow must be made as comfortable as possible in every way. She will tolerate no neglect or cruelty. She is a teacher of gentleness and kindness.

11th. Dairying is by far the most progressive branch of farming. Think of the changes for the better that ten years have brought, the Babcock test, the improvements in separators etc.

12th. Dairying pays better than any other branch of farming, both actually and prospectively. Look at the prices of farm products. Take wheat or sheep and wool or horses, and see how prices have dropped. The prospect is poor for many other products, but butter is as high in most markets or but a little lower than it has been for several years.

There is no business which holds out more inducements to the young people on the farm. It is adapted to a wider area of country than any other agricultural pursuit. Noxious insects and fungoid diseases cause less injury to grass, clover and corn than to any other farm crops, and these three are the great dairy foods. With such facts as these before him, I think the farmer who is puzzled to make ends meet at present, must get down and do some hard thinking. One of the first things that strike many such is that such a profitable line of business must be soon overdone. If he was in possession of all the facts, however, he would not think so. There is a greater unfilled demand for fine butter to-day than there was ten years ago, and this, notwithstanding the fact that butter is higher now than at that time and many times as much of it is now made. (1) The supply grows fast, but the demand grows faster.

Families, which formerly used one pound, now use three in the same length of time, and those who formerly ate hardly any, now have discovered that it is a cheaper and better food for young and old than meat.

The average quality of butter has wonderfully improved, and the demand is for the best, and this demand is unlimited and largely unsupplied.

The fact is right here in a nut shell, that any farmer who takes up dairying for a business, and follows it intelligently, using the best tools and implements for his work, will have a profitable, prosperous, continuing business so long as he may follow it.

Herein are dollars lying around thick, and the thing to do is to get right in and get some. Don't wait until another season or another time, for you won't live forever, and the quicker you get to making money the longer time you will have in which to be happy and make your wife and boys and girls happy.

H. WESTON PARRY.

(1) Our family now consumes one-third more butter at least than it did before we took our butter from the Compton Model-Farm. Ed.

The Horse.

HORSE BREEDING FOR THE MARKET.

Selection of Foundation Stock.

I take it that everything is in shape on the farm to receive stallions and mares, or the latter alone, for the breeding of carriage horses; the machinery for farming operations, and such other live stock as will go to make the farm's inhabitants a pleasing whole. It will not do to keep horses alone on a farm, for the reason that every farm does better if a variety of animals is kept on it and the profits are correspondingly better. According to the size of the farm, good milking cows in sufficient number should be bought, pure breeds most certainly, as they are invariably the most useful, as well as the most ornamental. It always pays to keep the best, no matter what sort of live stock is concerned, and if the farm owner chooses wisely, he may turn many an honest penny, by selling the produce for which there is always a fairly remunerative demand. Milk, the rearer of horses, must be available all the summer and fall, and the breeder had far better draw it from cows that produce annually calves that may be sold for \$50, than from cows whose calves only being a tenth of that sum. If the owner prefers Jerseys or Guernseys, he may keep these breeds to good advantage; if he prefers beef breeds, he will find Shorthorns or Galloways give plenty of milk and produce calves for which large prices can be obtained. Besides pure bred cows look so much better than scrubs, that they are to be preferred if only on the score of the appearance. Then a few mutton ewes may be kept. They will supply the owner's table with choice joints and they will clean up the fence corners and grant a bounteous return on the small amount of money it takes to buy them. Here again it pays to buy pure breeds. It is surprising how much good a few sheep will do on a farm, and what they eat in winter will not be of great cost. Though an old fashioned idea, it is nevertheless a very good one to give a nannie-goat the run of a horse farm. A well bred Angora nannie is by no means offensive to the eye, and while there may be nothing in the belief that the presence of a goat in the stable keeps disease away from the horses, it does not cost anything to keep her nannieship, and she might as well be installed as a free commoner. It pays to select every animal for the farm with the very greatest care, giving strict attention to procuring only excellent individuals, true to type, and of the early maturing kind. The greatest gains are made by animals in their earliest days, hence early maturing qualities are absolutely necessary to success.

Pigs, a few, should be kept to eat up the odds and ends and scraps from the house, and supply meat both for the house and help. A pig-stye may be kept as clean and neat as a stable; of course a pig will wallow in the mud and return to it, but there need not be any mud hole for him to wallow in, and he need not be permitted to root up the pastures.

Pigs pay well for the food which is given them, and no farm stock is complete without the "gentleman that pays the rent."

Having supplied himself with the above, the farmer now starts buying his mares. Obviously, he may buy his mares first if he chooses. In buying mares which are to be used in the production of carriage and coach horses, several things must be borne in mind. The mares must be absolutely sound. Blemishes from accidents, may, of course, be passed over, but care should be exercised to see that the blemish was not primarily induced by some fault in conformation. Curbs, spavins, sidelones, ringbones, and the like, should be rigorously excluded, such unsoundnesses come fast enough without trying to perpetuate them. Even though no unsoundness appears, if the formation is

faulty and predisposed to weakness, avoid the animal. For instance, a mare may not have a curb, and yet have a hock so formed that a curb may be sprung under a comparatively slight strain. So with spavins and certain kind of hocks, ringbones and certain kinds of coronets, etc., etc.

The joints should be large, the bone strong. The knees should be broad, the tendons well defined and the bone flinty in texture and covered with very fine hair. Bones that are thick with coarse wiry hair are necessarily soft and their increased size does not make them so strong, or so desirable, as those of finer, better quality. Trials performed with the dynamometer have proved that the bone of the thoroughbred would bear a much heavier strain, in proportion to its size, than the bone of the common work horse. Hence, the quality of the bone must be considered as well as its size. The hocks should be broad, clean and neither too crooked nor yet too straight. There is happy medium that blend well with a well set supple pastern, and gives the maximum of propelling power, with a minimum of predisposition to unsoundness.

The pasterns must be slanting. Short pasterns are generally straight, and their very straightness means hard usage for the feet—a deadly fault when it comes to work on the paved streets of the city. The feet should be large and round, the hoof tough and strong in texture; the heels open and neither too low nor too high, the pasterns gliding smoothly into the foot. Avoid narrow contracted heels and stiled, steep-up-and-down built hoofs. This sort of foot is always giving trouble, the formation being unnatural, and either the result of ill care, and the consequent disease, or inherited from parents similarly afflicted. Poor feet are transmitted with deadly certainty, and on the old, wise principle, "no foot, no horse," whatever else we lose, we must be sure to start with a good foundation.

There is an old Scotch saying, relative to the draught horse of that country, which runs thus:

"Give me feet, legs and feather,
Top may come, but bottom never."

which upon being applied means that in buying a horse, a man should always see to it that the foundation is there to start with. The feather is, of course, the hair peculiar to the British draught horse, and of itself an excellent indication of the quality of the bone beneath it. When it is silky and fine, the bone will be hard and of fine texture; when the hair is hard, coarse, curly or wiry, the bone will be spongy and soft. Mares designed to produce carriage and coach horses should have large feet, strong bone, big joints, clean, well defined tendons, and the nearest possible approach to the texture of the thoroughbred limb.

"Top may come," that is true; but it is better to have the frame of such shape and proportion that the animal will not have to be fed pig-fat before looking smooth and well.

W. R. GILBERT.

(To be continued.)

SOUNDNESS OR UNSOUNDNESS OF HORSES

(Concluded.)

My second lucky escape was on examining a hard puller. After looking at his mouth (and I must admit I had plenty of time that day), I was on the point of writing a certificate passing him sound, when I thought I would have another look at his mouth to make sure of his age. This time I noticed what I had failed to do before, which was that the muscles of the tongue were atrophied, almost two-thirds through. I think a good pull with one hand would have removed that tongue. I have always carefully examined eyes and tongues since. Having taken a glance over the subject from a veterinary surgeon's point of view, let us look at the different ideas of other horsemen on the subject. There are many classes

to deal with ; gentlemen lovers of horses, without any pretension to horsemanship; farmers, horsebreeders, dealers and others.

I have met many gentlemen fond of horses, many dealers and farmers who could examine a horse and detect any unsoundness as quickly almost as any V.S. On the other hand, I have often been surprised at seeing men, fond of horses and having been brought up and lived among them all their lives, failing to notice unsoundness which ought to be plain to our friend "The Meanest Observer." (1) Especially is this the case with regard to dealers, men handling hundreds of horses yearly, and yet never learning to recognise a spavin unless it is as big as a walnut.

There are many dealers, especially shippers of draught horses, who seem only to look for three things : age, sidebones, and wind, the latter being tried by a punch in the ribs ; a most unreliable test in my opinion.

Of course I am now alluding to respectable dealers, men in a good business, who endeavor to buy sound horses and whose reputation is of too much value to them to knowingly sell an unsound one.

Then there is our old friend the dealer who knowingly buys unsound horses, and tries to pass them on at a good profit as sound.

He is not, as a rule, very anxious for a veterinary examination, although he holds Veterinary Surgeons as a class very cheaply and considers he has forgotten more about horses than the whole profession ever knew. He is a man of many and ingenious excuses. If you notice a cloudiness of one eye, with a discharge and a small fleck on the other, and are suspicious of periodic ophthalmia, he is ready : "Oh I forgot Doc, he has two wolf teeth ; you might just get your forceps and pull them out ; that 'll soon fix his eyes ; if I had thought of it, I would have knocked them out with a chisel."

If the horse roars like a bull, it is the first morning he ever did. He must have caught cold last night. He remembers, now, he did leave him standing too long after showing him to that other party who is so anxious to get him ; and that reminds him he has promised that party an answer to-night. With him, a big bone-spavin is a small jack or a double joint ; a bog spavin is a small puff, which would not show if the horse had not been in the stable for three or four days, and does him no harm.

Ringbones, sidebones, corns, and every other unsoundness, have their own excuses, and finally he leaves your yard swearing you are the D——st know nothing of a Vet in town, and the only one who would condemn that horse.

Another class with which we have to deal is composed of merchants, business men, and other persons who look on horses as a mere convenience, and who in most cases do not aspire to any horsey knowledge, but leave everything connected with their stable to their coachman or groom, with instructions to call in their V. S. when necessary.

I have noticed that men of this class either trust their V.S. implicitly to see that every precaution necessary is taken to procure a thorough examination, or else appear to wish to do most of the examining themselves.

One incident I shall never forget occurred when I was at college. A well known, respected, and intelligent gentleman of this city called at the college to settle his account for care and treatment of his horse during an attack of pneumonia. He said he thought the charge rather high, especially as Doctor McEachran had passed the horse sound only two years before !

I should like to say a few words on the subject of Examinations at Shows and Exhibitions. I have noticed that in examining stallions and broodmares, especially in the thorough bred classes, veterinary surgeons are too apt to get into one of two grooves.

The strictly professional man is too apt to condemn a good horse for some slight unsoundness, thus giving a chance for a prize to a worthless brute with nothing but looks to recommend him, while the "horsey" Vet, or should I say the race horse Vet? is apt to look over

(1) Just our own case. ED

serious unsoundness in a horse he knows to be good. For myself, I have always had a little leaning to the latter view, and I have always been in favor of stallions and mares in breeding classes being examined for freedom from *hereditary* unsoundness, and not for absolute soundness.

As an instance; I remember some four or five years ago at a show looking over the four thoroughbred horses Quito, Bushbolt, Lee Christy and Gladiator; a confrère, who leaned to the professional as opposed to the horsey side of the question, was of opinion that all four should be condemned as all showed more or less decoration from the firing iron. (1) My reply to him was that I had seen very few good thoroughbred horses really sound after their third or fourth year.

The really sound ones we meet with at shows are those that have been put to the stud because they could not earn a cent on the course.

I think I need not say the V. S. in question was *not* Dr Charles McEachran, all round veterinary surgeon and horseman.

WM. WARDLE, JR. V. S.

The Garden and Orchard.

(CONDUCTED BY MR. GEO. MOORE.)

HOT-BEDS.

The season for making hot-beds is approaching, and we give a few lines as to their making and management. In the first instance some fresh horse manure must be secured, and put in a heap, which should be turned over once or twice before the hot-bed is made, to induce gradual fermentation. In making the bed, care should be taken that the manure is spread equally, layer by layer, over its entire surface. In case of the manure being very dry, it may be advisable to give it a slight sprinkling with water, but this is best avoided if possible, because it has the effect of causing the fermentation to be too quick and the heat to be too great and not to last so long. When the bed is made, it may be allowed to settle for a short time, and then the frame may be placed upon it; a few days may now elapse to let the first vapour arising from the bed escape, and then the soil may be placed on it. The soil should be rich, light loam, well sifted and levelled at an equal depth of four or five inches all over the bed, not pressed firmly except round the edges and in the corners to prevent any heat from escaping there. After a day or two, the crop may be sown as near as possible to the surface, the depth being regulated by the size of the seed. Germination will take place and cuttings will root more rapidly when the heat of the soil is about 12 degrees greater than the atmosphere above it, therefore, to insure success, it is well to be provided with two thermometers, one to tell the temperature of the soil and the other that of the air in the frame.

To keep the temperature of the hot-bed equal, in its interior, a plan was recommended by Mr. Wright, late President of the Royal Horticultural Society: A wooden spout or iron tube about 1½ inch in diameter is placed in the manure, going through it from the front to the back of the bed and open at both ends; into this tube are inserted three others, three fourths of an inch in diameter, and these rise perpendicularly through the manure and soil and discharge the heated air which ascends from the larger tube or spout, these tubes can be opened or closed as occasion requires and

(1) Our own two "Irish Birdcatcher" colts were fired at two year-old as a preventive, that grand stallion, winner of the "Chester Cup", about 1842, having suspicious hocks. The colts never showed the slightest unsoundness, though we drove them in London till they were respectively, ten and eleven years old, and then sold the pair for £150. ED.

thus the air in the frame can be kept at a proper temperature, and if the glazing of the frame be air tight a great degree of cold can be overcome without resorting to mat covering and thus the plants on the bed will be permitted to enjoy the light as well as the heat, a matter of great moment as to the health and vigour of seedlings which, if "drawn" for the want of light, never make such robust plants.

(To be continued.)

CURIOUS FACTS.

Fruits with aromatic flavors have the same principle in the leaves, which may be extracted by immersing them in saccharine fluid, and alcohol distilled from them will possess the corresponding bouquet.

The lightest substance known is the pith of the sunflower-stem ; for life saving appliances at sea, cork, elder pith and Reindeer's hair have been considered the lightest, but as lightness of materials employed for these are of the utmost importance, it is possible that the culture of the sunflower may be made profitable when we consider how many useful purposes its various parts will serve.

It has been ascertained by experiment that earth worms have a beneficial effect upon some soils by ventilating them by means of their burrows.

Feeding Plants Artificially.

Mr. W. Paul, the eminent rose culturist of Cheshunt, England, writes to the *Gardener's Chronicle*, Oct. 23, 1897, on a method employed by Mr. Geo. Truiffent, of administering artificial food to plants. An analysis of the ash of a species of plant to be treated is first made ; then the necessary salts to produce a similar one, and keep it growing, are weighed out, and enclosed in a metal cover, to form what is called a "pill" ; this is inserted in the pot with the soil and plant. Diffusion of the salts takes place through the folds of the metal, and the thicker the metal the slower the diffusion. The salts dissolve and disappear, but have no effect upon the metal cover which remains firm and hard. It is stated that the solubility of the salts can be regulated so that the effect of the "pill" will last from three to six months, as desired. By this method, vigorous, highly colored plants can be grown in pots of less than half the usual size.

We should be almost inclined to doubt the accuracy of this statement, were it not for the notice taken of it by so reliable and scrupulous an authority as our old friend, Mr. Paul ; when we talk about administering "pills" to plants it looks as if the day is not far distant when we shall have horticultural physicians in regular practice.

Fever in Plants.

It appears from curious experiments recently made, that when plants are wounded their respiration increases, and at the same time their temperature perceptibly rises as if a kind of fever had been produced by the wound. To ascertain this, a thermo-electric apparatus, capable of registering a change of one fourth of one hundredth part of a degree was employed. When a growing potato was wounded, the fever manifested

itself by an elevation of temperature which was greatest at the end of twenty-four hours when it began slowly to decline.

An onion, similarly treated, acquired an increase of temperature many times greater than shown by the potato, and the fever, instead of being confined to the vicinity of the wound, affected the whole onion. In fact, the onion appeared to be more easily affected in this way than any other vegetable experimented with. This curious rise of the temperature of the plant is caused, doubtless, by the increased absorption of oxygen.

NOTES ON STRAWBERRY CULTURE.

(Concluded.)

In this northern climate one of the most important considerations in strawberry-culture is winter protection, this must by no means be neglected else we shall find when spring comes that all our labor has been spent in vain and in place of a fine bed of green plants will be found a mass of blackened leaves. One of the best coverings for this purpose is the tops of the asparagus when cut in the fall, but they are not always to be obtained and a very good substitute may be found in swamp-hay when it can be procured easily and at a nominal cost, pea straw or stravy manure also does very well, but none of these must be applied too thick to smother the plants, or the bed may be ruined as effectually as from lack of covering. In the spring, as soon as all danger from frost is over, the covering may be removed and burned and the ashes used as a fertilizer.

There is considerable art in picking strawberries and as much difference between one picker and another as there is in any other business; for instance, one picker will seize a bunch of berries, and in his efforts to get the ripe ones twist and mangle the remaining green ones so badly that they eventually wither away before coming to maturity and are thus a complete loss. Another fails to sort the berries properly and their selling value is thus injured, while a third will gently and dexterously remove the ripe berries without juring the green ones in any way and sort them with the greatest care; it is therefore of the greatest importance to select pickers who will handle the berries carefully and sort them properly. In gathering the crop no small or inferior berries must be allowed amongst those intended for market, each picker must carry 2 baskets or berry boxes, one for the first class berries, the other for the smaller ones and those damaged by birds.

The best method of marketing the berries is in the quart berry boxes or cups, which can be got at a nominal price and are much preferable to the larger packages, in which the berries are likely to get squeezed, and do not present such a fine appearance. Cases can be procured in which from two to six dozen of these boxes can be easily packed and they are then in convenient shape for marketing. The inferior grade of berries can be readily sold to some canning establishment. In any well kept strawberry bed not more than two consecutive crops of berries are taken off the same piece of land, as the plants bear best when young and after two or three years the ground begins to harden and the weeds to become more numerous, it should then be plowed under and planted in some crop which will clean it, such as corn or a root-crop.

There are many insect enemies to the strawberry, among which are numerous borers, gall-flies, and cut worms; the ravages of some of these pests can be checked to a considerable extent by the use of hellebore; the common white grub (the larva of (1) the *May beetle*) also works considerable damage by cutting off the young plants below

(1) The cockchafer.

the surface of the ground. A rather difficult disease to cope with and one that requires prompt attention when it strikes the strawberry bed, is the leaf-rust, it seems to attack some varieties more than others and its presence may always be known by the spotted appearance of the leaves, its effect is most noticeable on the old beds, the young plants appearing to have more vigor to withstand it, but it may in a large measure be overcome by the systematic application of Bordeaux Mixture.

Strawberry culture is one of the departments of horticulture which allows plenty of scope for experiment, and those who engage in it will find themselves richly repaid for any extra attention which they may bestow upon it, both in the satisfaction felt at having a fine crop of strawberries and in the profit derived from the same.

M. JACK.

The Poultry Yard.

A chapter on Turkeys.—The Best and largest Breed for the farmer.—How to mate and breed.—The proper care and food young birds.

—(A. G. GILBERT.)—

Active work at Farmers' Institute meetings, for some time past, has prevented me from having the pleasure of writing to your paper on poultry matters, as I have so frequently had the pleasure of doing. The arrangement of a complete system of cold storage,—by car or by steamboat—from many points in Canada to the British markets, by the Dominion Minister of Agriculture has opened a very large market for a superior quality of poultry and eggs to our farmers. The poultry in demand is principally turkeys, geese and chickens. But they must be all of superior quality and killed, dressed, packed and shipped so as to arrive in good order and otherwise conform to the conditions required by the British buyer. But it is evident that the farmers must first produce the birds of large size and superior quality before the shippers can be in a position to send them out of the country. What breeds make the large birds? First we take

Turkeys.

There are six varieties of turkeys, viz: Bronze, Narragansett, White Holland, Black, Buff and Slate. Of these the Bronze is the largest and best known, next comes the White Holland. A farmer in a neighbouring township recently informed me that he had excellent results from a White Holland male crossed with his common turkey hens, But it is better, if circumstances will permit, to breed thoroughbreds. They are undoubtedly larger and, in the majority of cases, hardier. It must be remembered that it is the large bird of good condition that is wanted, in the British market, prior to the Christmas season. And where turkeys are paid for by the pound, size and weight mean money. There are several well-known breeders of Bronze turkeys in the Province of Quebec. You ask what is the best way of raising turkeys?

How to raise young turkeys.

It must be remembered that previous to "shooting the red," the young turkeys are the most tender of all feathered fowl. After they get over that critical period they are the hardiest. It is all essential then to success that great care be taken of the young birds. The first important requisite to success is that the breeding stock be strong and vigorous. Inbreeding must be avoided. It is admissible to use a good male for two years, but do not mate a young cock with pullets of the same family. Much of the disaster so common to flocks of young turkeys may be traced to weak parent stock or inbreeding.

A large vigorous male may be mated with 10 or 12 females. It has been found by experienced breeders that young hens weighing 15 to 18 pounds and old hens from 18 to 20 lbs are the most prolific egg layers and make the best mothers. Too early setting of the eggs is not to be recommended. It is a good plan to give the first seven eggs of the *quota* laid by the turkey hen to a common fowl and 11 of the remainder to the turkey hen. About two dozen poults are about all the turkey mother can keep dry. The hen turkey will be found the best mother.

Food and Management.

Having got the young birds, care must be taken to have them kept in dry quarters. The coop should be roomy and so situated that mother and brood may be easily driven into it, in case of rain. The first food may be stale bread soaked in milk and squeezed dry. Occasionally mix in a little hard boiled egg and finely chopped onions. Curd or cheese made from sour milk is good and will be relished. Or a cake may be baked of oatmeal, stale bread and cornmeal and fed dry. As the poults get on their legs a mash composed of rolled oats, onion tops, cornmeal or middlings and mixed with boiled milk, may be fed. The milk should be boiled in all cases and a little black pepper dusted into it, before mixing into the food. All food should be cooked. The feeding of uncooked, unclean, or carelessly mixed food, is the cause of many young turkeys dying.

For the first five or six weeks feed four times daily. Afterwards 3 times.

At the period of "putting on the red," the young turkeys are apt to eat ravenously of whatever food they can get hold of. But it behoves the careful breeder to see that the young turkeys do not get any but cooked food and that they are not allowed to gorge themselves.

Lice are another cause of mortality. Care must be taken to keep, by means of insect powder, the young birds free of lice. After becoming fully feathered the young stock require nothing but hard grain. Give the mother-hen and brood a grass run, if convenient, but see that they are not let out on the grass while it is wet with the morning dew.

Turkeys are fond of roaming. A good plan to accustom them to come home is to give them a feed of grain every evening, at the same hour, near the place you wish them to roost.

By following the above points, briefly given, less difficulty will be met by the farmer or his thrifty spouse, in bringing his turkeys to maturity, than by following less careful management and treatment.

EXPERIMENTAL FARM, }
Ottawa, 28th Jan., 1898. }

Household Matters

Laying the Table-Cloth.

A well cooked dinner deserves to be treated with care in serving up.

This can only be done by careful attention to every detail. Every article placed on the table should receive the greatest care that it is neat and clean.

A nice, well-laundried cloth, with *very* little starch in it, will do much towards the appearance of the whole table. Care must be taken to lay it even, the centre crease or fold in the middle, and a pot of flowers, or green stuff of some sort, as a centre trimming, round which throw a bit of the many sorts of art muslin to be got just now for a mere trifle. Puff this round the pot as nicely as possible and be sure to fold it up carefully when done with: it will then last a long time and look nice.

Knives, forks, and spoons, bright and shining; salt cellars filled with fine salt free from lumps; mats for the dishes to rest on, crocheted ones are very pretty; done in

coarse white cotton they will last for years and only need washing now and then to keep them nice and fresh; stretch them into shape on a flat surface to dry, and never let them be ironed; square ones are the fashion just at present, or, I should say oblong, like the dishes that rest on them.

Let tumblers and crockery to be as bright as possible. Let every thing be placed in good order, and avoid crowding, which is decidedly vulgar. Do nothing carelessly, and however humble the fare it will look all the nicer for these little attentions in small matters; and, rest assured, the ailing appetites will be tempted, and the possessors of strong ones will admire your efforts to please.

All dishes must be hot. Dinner over, be sure to fold up the cloth carefully, after brushing off the crumbs; then it will last quite a time and always look nice.

Theory of Digestion.

A man feels drowsy after a hearty dinner because a large part of the blood in the system goes to the stomach to aid in digestion and leaves the brain poorly supplied.—*Popular Science News.*

LAUNDRY HELPS

Ironing Day.

Next to washing day, every busy housekeeper dreads ironing day. Where there is a large family of small children, ironing really becomes a great burden. After all, is not this ironing of plain linens rather a waste of time and strength? Why not let the domestic mangle do a little more work? Underclothes look much prettier when ironed, but that is all—they do not smell as sweetly, do not last so long, and are not so wholesome. But the clothes must be well sunned; if dried in the house on account of a storm, hang them out in the sun another day. By denying yourselves the pretty ironed garments you may be a calmer, happier, stronger woman for those whose lives are bound up with yours. As to table-cloths, napkins, handkerchiefs, and pinafores, by ironing a little at a time they will give you no trouble. Pull the sheets thoroughly, and be careful that everything is snapped and folded as it is taken from the line.

Test blueing with washing soda; if it turns red it is made of Prussian blue, a compound of iron. With some soaps and washing compounds this is decomposed and causes iron rust spots.

If sheets or tablecloths are wrung by putting the selvedge through the wringer, the edges will not curl up, and they will iron much easier.

Do young housekeepers know that if they accidentally scorch a garment in ironing they need not worry? Lay it where the sun will shine full on it, and the mark will disappear.

To remove iron-mold stains from linen a little oxalic acid should be dissolved in water, and the stained part dipped in the solution, when the iron-mold will disappear without injury to the fabric. The mixture may be kept in a bottle for any length of time, but it should be distinctly labelled, as it is a strong poison.

Put a little salt in the water if you wish to prevent black calicoes from fading when they are washed.

Ammonia will bleach yellow flannels.

A USEFUL HINT***Business Judgment.***

If farmers, and poultrymen generally, would use more business judgment they would be more successful. It is not only necessary to send fresh eggs to market, but they should be well sorted in the crate as to color and size. Furthermore, they should be clean. Dirty eggs and all varieties of shapes and colors will not attract the eye of the buyer. In these days of close competition one cannot be too careful about the manner in which shipments are made. It is the same with dressed poultry. Poultry should have a plump and tempting appearance, free from pin feathers and absolutely clean. The head and feet should have a clean and fresh look.

HOUSEKEEPER.

Maple-Sugar.

20th January, 1893.

G. A. GIGAVLT, Esq.,
Assistant-Commissioner of Agriculture,
QUEBEC.

DEAR SIR:—

Although it is still rather early in the season, I want to refer again to the Maple Sugar question.

I now hand you the names of a few houses which use the sugar. I judge that most of the manufacturing confectioners purchase through brokers:

Fullers, Ltd., 538 Strand, London, W. C.

Clarke Nicholls & Coombs, Ltd., Hackney Wick West, London, N. E.

Both these are manufacturing confectioners.

Another firm which might also purchase is: Greenhaigh, MacLaren & Simpson, Ltd., 58, Victoria st., Liverpool.

The following brokers deal in Maple Sugar:

W. Stuart Thompson, 34 Bath St., Leith, Scotland.

A. Allan & Co., 6 Hart St., Mark Lane, London, E. C., and I have also heard of the following:

Talmage & Co., 54 Titheham St., Liverpool.

Your friends might write to some or all of these people now; so as to hear from them in time to quote for the coming season.

You are probably aware that the demand for this kind of sugar is small. For maple syrup, there is at present no sale at all. In fact, the product is practically unknown. Whether it could be successfully introduced is an open question. A fair amount of golden syrup (*treacle*) is used, and one man told me that by the expenditure of money it was possible that maple syrup might be introduced.

People of the United Kingdom are very conservative and have to be educated up to anything new.

I should be pleased if you would indicate at any time any way in which we can help the export trade of the province. I can always obtain reports about any product.

Yours faithfully,

(Signed)

HARRISON WATSON,

Gurator.