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THE
Canadian Agriculturist
 AND
 JOURNAL OF THE BOARD OF AGRICULTURE
 OF UPPER CANADA.

VOL. XV.

TORONTO, SEPTEMBER, 1863.

No. 9.

THE APPROACHING EXHIBITIONS.

The Provincial Exhibitions of both sections of this Province, and the State Fairs of several of the adjoining States, will take place during the present month. The Lower Canada Show, at Montreal, and the New York State Show, at Utica, take place on the same week, 15th to 18th inst. Some of the Agriculturists of Upper Canada, will doubtless compete at one or other of these Shows, before attending our own at Kingston the following week, and mere visitors may, without much difficulty, if they choose, be present at both of them long enough to have the advantage of inspecting the more important departments pretty fully.

The prospects of our Exhibition at Kingston on the 22nd to 25th inst., are sufficiently encouraging to warrant us in believing that it will not suffer in interest and importance by comparison with any of its predecessors. There are some classes, however, in which the entries are not yet so numerous as they should be, and we would recommend farmers and others who have products which they think of exhibiting, in any of the classes in which entries can yet be taken, to send them forward without delay. In Fall Wheat, particularly, the representation, judging from present appearances, is likely to fall much below an average, there being at the time of writing, but very few entries. This may be owing to some extent, to the character of the season, which has not been very favourable to the production of a fine sample. But as the large number, and excellent quality of the samples of fall wheat, has heretofore been such

a characteristic feature at our Upper Canada Provincial Shows, it would be a subject of regret if they should fall off in this respect, and we would therefore urge, if it be not too late when this reaches our readers, that those who have it in their power will do all they can to remedy this probable falling off. In the Horticultural Department we have every reason to suppose that the Exhibition will be as attractive as usual. There is still time to make entries in this department, and they should be sent to the Secretary of the Association, at Toronto, at once.

We would remind intending exhibitors, that all articles except live Stock must be on the Exhibition grounds on Monday, September 21st. Live Stock must be there by Tuesday, 22nd, at noon. Exhibitors of heavy articles, such as heavy machinery or Implements, are recommended to have them on the grounds, if possible, by Saturday 19th, so as to afford time to place them properly.

The inducements offered to visitors and exhibitors in the reduction of railway and steamboat fare will be greater than on previous occasions. The Grand Trunk Railway will charge passengers and articles going to the Exhibition one full fare on going there, and will carry back the same, free; owners of stock, implements, &c., on their return being required to show that they have not obtained such stock, &c., since going to the Exhibition. The reduction of fare will commence on Wednesday previous to the Exhibition, and last until the evening of that day fortnight, thus extending over fifteen days. It is supposed that the other Railways and Steamboats will offer the same liberal terms.

EDITORIAL NOTES DURING A TRIP EAST.

After having attended a meeting of the Board of Agriculture, the latter end of July, at Kingston, we resolved on returning to Toronto by land, devoting about a week to the journey. We had thus an opportunity of calling on a considerable number of agriculturists, through the several districts we had to pass, of observing the state of the crops, and the different systems of farm practice; and of obtaining much valuable information. This article will therefore be made up from some of our jottings on the way.

We found the Local Committee at Kingston actively at work in making preparations for the approaching exhibition; and everything indicated a unanimity and strength of purpose that will ensure the completeness of the arrangements. The corporation of the city of Kingston, and the council of the united counties having made liberal grants, the accommodation provided for every department of the show will be much improved and augmented. From all that we could learn there is every reason to believe that the exhibition will be, as on previous occasions,—a credit to the various branches of industry that create the wealth and constitute the stability of the country.

We were somewhat surprised to find the country for several miles around Kingston suffering from a severe drought, the ground not having been thoroughly wetted since the commencement of spring. Notwithstanding, the Kingston market appeared to be well supplied with vegetables of excellent quality, and at moderate prices. This lime stone soil, in a showery season especially, is admirably adapted to fruit, vegetables and grasses, which it produces in abundance and of the best quality. For many years we have been in the practice, when in Kingston, of going over the Vicar General's extensive garden, adjoining Regiopolis College, and have seen horticultural operations of the more ordinary and useful character carried on there with much success. This garden affords a pleasing illustration of the triumph of skill and labor over great natural difficulties; the lime stone rock cropping out to the surface having been quarried for the building of the college, and conse-

quently a new soil had to be formed. The drought this season has seriously affected the crops; the fruit trees, several of them at least appear declining, and the garden having gone as we understand, in other hands, there is an absence of that attention and clean culture for which it used to be distinguished. In the bye, the Bishop's garden, of much small extent a little higher up, has recently been formed under similar disadvantages. It is quite a gem of its kind; the vegetables excellent and flowers beautiful. This stiff soil has been much ameliorated by deep and thorough tillage, and might be further improved by an admixture of decomposed black muck or bog earth, and well rotted sod mould. We are always pleased to see the clergy bringing their taste and influence to bear on the improved culture of the soil, whether be on the farm or in the garden. Instances of this are to be seen everywhere in the British islands, and most European countries attended by untold blessings. The church that is the religious houses, even in the gloomiest periods of history, was not only the conservator of learning, but she kept alive the embers of agricultural knowledge and of terrestrial improvement. The monks were the best farmers and gardeners of the age. Happy would it be if every country minister the present day had attached to his residence a beautiful garden and productive glebe and while impressing on his people the high truths of revelation, did not omit to teach both by precept and example those salutary and refining lessons which the cultivation of the soil, directed by a love and knowledge of nature, is so admirably calculated to impart.

The country on either side of the beautiful and extended bay of Quinte is varied and exceedingly picturesque in appearance, the soil resting on solid limestone rock, and generally productive. Amherst Island which separates the lower part of the bay from Lake Ontario, belongs to an Irish gentleman, who entrusts the management of this magnificent property, consisting of about 12,000 acres, to his brother, Mr. Percival, with whom we formed an acquaintance while crossing the Atlantic, some three years ago. The farms on the island are generally small, or at least of moderate extent, rents very low, and the people well to do. No winter wheat is now raised, nor root crops, except potatoes to any extent. The timber is mostly hard wood, with no more of it than is sufficient for fuel and fencing. The land is well adapted in most places to pasturage, and several of the farmers have good grade cattle, and excellent Leicester sheep. Draining here, as in most other parts, must be the principal means of agricultural advancement.

We spent two or three days very pleasantly in the county of Prince Edward, the surface

ing undulating, the scenery is often very varied and pretty. Formerly, winter wheat was extensively grown in this county, but for the last few years its culture has entirely ceased, owing chiefly to the action of insects and early spring frosts. Spring wheat appeared pretty good, though late, and we saw or heard but little of the depredations of the maggot or fly. Peas were excellent, to which crop both climate and soil are well adapted, and there is generally an absence of the maggot, which is often so destructive of this grain in other places, particularly in more southern latitudes. The greater part of this county has more or less suffered from drought, and the hay crop consequently was in many places, a failure. As one travels west the amount of the rain fall increases, and the crops look better. The central parts of Prince Edward, we were informed, are particularly liable to drought in summer. Thunder rains either divide or incline to the direction of the lake or the bay, and the middle and higher portions of the country suffer thereby for want of sufficient moisture.

Hops are cultivated to a small extent in several places in the eastern section of this county. Of late the crop has been a paying one, but some half-dozen years since, prices were so reduced that the cultivation became very unprofitable, and the plantation was consequently reduced. We saw several gardens (or as they are termed here "yards" in the township of Hallowel, that appeared to be skillfully managed, kept clean, and the soil thoroughly pulverised during the period of growth by the horse hoe, or cultivator, in a style similar to what one observes in the Kent, and Sussex plantations in England. The hops are planted in hills about seven feet apart, two poles of from 16 to 18 feet and upwards long, to a hill. To an old countryman the rapidity with which hops come into full bearing appears to border on the marvellous. As a general thing the plants from cuttings in England require at least two years and sometimes three before they arrive at their full vigor, but here a heavy crop is often raised the first year; that is to say hops planted in the spring will produce abundantly the fall but one afterwards. We observed many instances of the bine (or vine) reaching, to top of 16 or 18 feet poles, having been planted only 14 months! Indeed we saw in one garden a pole 28 feet high covered to the top and throwing out a number of lateral branches! And, from enquiry, we found that there is but little risk in Canada of injuring the young stock from the use of too long poles, as undoubtedly exists in England. It is well known there that whole gardens have been permanently injured by what is termed "over poling" at the commencement. There is no doubt a limit even here which it

must be injurious to pass, and we think that we saw some gardens illustrating this fact in the before mentioned township; and we invite the attention of our hop growers to the subject, and should feel obliged for any information respecting it. One thing appears quite certain, that if hops come to earlier maturity in Canada than in England, they are much less durable; and this remark we believe, will also apply to fruit trees and other productions. Those who have had the longest experience in raising hops in this country inform us that the plant generally requires to be renewed every six or seven years: whereas in Europe it will continue productive for periods of a dozen or twenty years, and on some soils considerably longer. The white cedar which abounds in our Canadian swamps affords a durable and beautifully formed hop pole, and would be considered of inestimable value in the old country, but its exportation would not pay.

We heard from a person who has had a long experience in hop growing, both in Europe and Canada, that taking as a basis what may be termed a moderate crop here, viz., 10 or 12 cwts. per acre, the whole expenses of an acre would amount to about \$70 or \$80. This includes rent of land, manure, wear of poles, labour during the period of growth, picking, drying, and preparing for market. Now 12 cwt. at 15 cents per pound, would amount to \$180; leaving a profit of \$100 per acre! And this sum, or even a greater, is doubtless occasionally realised, but it would be exceedingly fallacious to assume that amount as the profits of hop growing in the long run. A diminution either in price or the weight of crop would of course affect the rate of profit in a similar proportion. In some years a blight would be experienced, in others a very much reduced price; which was the case a few years since, when some people abandoned the culture altogether. Whether the raising of Hops can be made permanently to pay will depend upon quite a number of conditions; such as suitability of soil, local climate, supply and demand, and last, but by no means least,—the skill and judgment of the cultivator himself. Without these personal qualifications, however favourable may be other conditions, we advise no farmer to become hop growers; a department of husbandry which requires experience and no ordinary amount of care, observation and perseverance. The *curing* is quite if not more difficult than the growing, and from inattention or lack of skill in the former very serious losses may, or rather will arise.—In cases where the principal conditions to which we have adverted are favourable, Hop growing no doubt will afford a much larger profit per acre than ordinary farm crops, and this has been the case for the last few years.

The consumption of beer in this country is on the increase, and its *quality* of late, particularly in the larger city breweries, has been greatly improved. Now and then we meet with Canadian ale that would not suffer in a comparison with the world renowned beverage of England; but it must be confessed that most of this article manufactured in Canada is yet of an inferior description. Improve the quality, and the consumption will increase, and the public taste will become more correct and healthy. The bearing which this subject has upon an important article of agricultural produce,—barley,—must be obvious to every one.

On reaching Brighton, in the county of Northumberland, where hops have been cultivated on a small scale for many years, we were informed that nearly 150 acres were planted last spring in that vicinity. If anything approaching this has taken place in other localities, there cannot be the shadow of a doubt that the supply will greatly exceed the demand in Canada. We are not likely to find a market for our surplus in the States, where they usually grow much more than they want for domestic consumption, and where too our hops would be subjected to a heavy import duty. England must be our market, as it is to a large extent that of the Americans; but it could only be when the British crop fell short that our export trade would be profitable. It is true that both excise and import duties on hops have been recently abolished in England, a circumstance favourable to importation to that country. We would urgently recommend our hop growers to pay the best attention to the growing and curing of this article, both for domestic and, particularly, foreign markets. The flavour of American hops is not well liked in England, and brewers have sometimes sustained serious losses in using them in the manufacture of pale ales for the eastern markets. The complaint is that they impart a flavour resembling that of black currant leaves. Of late, however, an improvement has been effected; clean picking and proper curing will no doubt improve the value of the article. It is a fact worth noticing by the political economist that while the British market is free to all the world, we in Canada, heavy as well as the United States, impose a import duty on this article coming from abroad, a circumstance which shows that free trade and reciprocity are not always identical.

Although the County of Prince Edward was among the first sections in Upper Canada that were settled, and has, perhaps, the largest amount of wealth in proportion to population of any in the Province, its taxation extremely light, and, as we understand, unblest by a public debt, its agriculture has made of late years comparatively slow progress. Much of the land has been over-crop-

ped, and weeds have got the ascendancy. Deeper tillage and draining would effect wonders, in a few years. Wherever these ameliorating means have been tried, the results have been invariably satisfactory. Rye and buckwheat occupy here too large an area in any system of improving husbandry. The breed of horses is good, excellent roadsters, but a little too light for deep cultivation, where the soil is heavy. It is somewhat remarkable that none of the improved breeds of cattle have ever taken a hold in this country. The cows in general are small, but they yield good milk, and considerable quantities of butter and cheese are made for the market. The introduction of a few good bulls of some of the improved breeds would be attended by the happiest results, and we were glad to see a young Ayrshire bull the Agricultural Society had purchased of Mr. Wright of Cobourg, a very promising animal, and also a Durham bull recently obtained from Mr. Wilcox Baldwin, of Oak Ridges, in the county of York. This is decidedly a step in the right direction. We must remind our Prince Edward friends, however, that next to a good breed is *good keeping*, and would urge on them a larger cultivation of root crops, which, with the exception of potatoes, hardly exist as field productions. We observed on the farm of Mr. Beadle, the president of the county Agricultural Society, a piece of mangel wurzel of about two acres, which looked promising: but in going through the county we did not observe so much as half an acre of mangels, turnips, carrots, nor anything of the sort. Where the hay crop is so liable to be light, especially as it is in this district the present season, roots must be found a most valuable auxiliary. Indeed our best farmers in the west could not do without them. In a season of drought, turnips are no doubt difficult to raise, especially on stiff clay soil. But by deep and clean culture, judicious manuring and a determination to succeed, mangels, carrots, etc., may generally be depended on. We would not recommend beginners to commence root culture extensively, but to begin in rather a small way, and increase by degrees. One acre thoroughly managed, will yield as much as two or three indifferently treated.

Journeying westward, the country improved in appearance; the rains had evidently been more abundant, and the hay crop particularly, was better. We spent a day or two most agreeably in the vicinity of Cobourg, and profited much from observation and intercourse with intelligent and enterprising farmers, whose kindness and hospitality we shall long and gratefully remember. We took up our abode for two nights under the hospitable roof of the Hon. Henry Ruttan; and were happy to find him again restored to

his usual state of good health, full of hope and animation, especially in his favorite pursuit of ventilation, in which by indomitable perseverance and energy of character, he has now the enviable pleasure of knowing that he has attained to a degree of success, acknowledged alike by scientific and practical men over no inconsiderable portion of this vast continent. Mr. Ruttan pointed out to us some draining that he was doing in an adjoining field, but he will pardon us for saying that he is not quite so familiar with the most approved systems of land drainage, as he unquestionably is in thoroughly ventilating and warming our houses, railway carriages, and public buildings generally. And here a thought occurs to us which we may be allowed to put on paper. Mr. Ruttan belongs to a class of men in Canada, which is rapidly passing away. Natives of a country which was then a wilderness, they had but few intellectual advantages, and in the pursuit of knowledge under difficulties, of which the present generation know nothing, they have by the force of character left indelible traces of their progress, and the benefits they have conferred on their age and country. Let us hope that in these days of schools and colleges, and all the modern appliances of improvement and civilization, our young men will learn to appreciate the services of these hardy pioneers, and emulate their example. There is a danger in the present increasing tendencies of the age to a soft and easy life, that we should forget or undervalue the important services rendered to posterity by the leading minds among the early settlers in what was then a vast and almost treadless wilderness.

We observed in the garden of Asa A. Burnham, Esq., President of the Provincial Association, a small plot of Bockhara clover, which was sown as late as the 2nd of June, the plants had come up tolerably even, and were growing vigorously. Mr. Burnham will report on the result as soon as obtained. Quite a number of experiments are in the course of progress by different farmers with foreign seeds from the late International Exhibition, of which we shall hear more by-and-by.

We spent a very agreeable day with Mr. Walter Riddell, who occupies a hired farm near to Cobourg, the soil is first-rate, well adapted to the general purposes of husbandry. Under Mr. Riddell's judicious management, he has succeeded in making his farming operations pay, without, judging from the appearance of the crops, impairing the productive power of the soil,—a condition not invariably found on rented farms in this country. We observed in a portion of a field some horse beans, a crop, Mr. Riddell informed us, he usually cultivated in a small way, but not with very marked success. It appears to us, from, it is true, rather limited observation, that our climate is not genial to the field bean; that is to such varieties as are so exten-

sively grown in the British Islands. Owing, we think, in great measure to the heat of this climate in summer, the blossoms of the field bean, (and it is often much the same with the scarlet runner) do not fructify, but drop off, and consequently prove unproductive. In some parts of Lower Canada and the eastern coasts, these kind of beans succeed better, influenced probably, as in the case of oats by a moister atmosphere. We have, however, an excellent substitute for beans in peas and Indian corn. We went through several fields of spring wheat belonging to Mr. Riddell, and the adjoining farm of Mrs. Wade, which promised a yield of 25 to 30 bushels an acre. The midge, however, we found at work, both here and in other places, and injury to some extent must have resulted. We were glad to find that Mrs. Wade has some of the pure Durham cattle, bred by her late husband, and could not but admire the productiveness of her extensive garden, and the beauty and tasteful arrangement of a large and varied collection of flowers. It is pleasing to observe in travelling over the country, the effects of the taste that is springing up for horticulture, a sure sign of increasing luxuries and refinement among the people.

Mr. Riddell drove us through the entire length of the county of Hamilton, to the shores of Rice lake on the north. The physical features of this district are considerably varied, and consequently so its soils and modes of farming. The low, rich, belt of land lying a few miles wide along the lake shore, is studded with good farms and comfortable homesteads, but it is remarkable that little, if any winter wheat is now cultivated within a few miles of the lake shore. So few trees have been left, and the country so opened to the influence of the sun and lake that the surface is denuded of snow in March and April, exposing the young wheat plants to the alternation of freezing by night and thawing by day, thus lifting them by degrees out of the ground. Five spring wheat is almost exclusively cultivated here, it is harder than the club, and when unaffected by insects yields liberally. We afterwards called on Mr. Hume, an intelligent and enterprising farmer on the higher ground to the north, where we came into the region of winter wheat, which was being gathered in, apparently a very fair crop. Here there is plenty of wood to shelter, and the snow lies longer on the ground than in the more thoroughly cleared region below. Mr. Hume's residence is considerably elevated and highly picturesque; we found him at his bush farm, a few miles north, busy in hauling peas and wheat. It is astonishing what a change labour will effect in a few years in these wilds. It is rough, but not altogether unpleasant work. The Backwoodsman, under Providence, is the creator of beauty and utility, and the consciousness of which is a perennial source of satisfaction and pleasure. In the frontier counties there can scarcely be said now to be any backwoods in the primitive sense

of the term, since settlements have been formed in all directions, and no extensive blocks of wild forest exist. In this part of the county of Northumberland new farms are yearly in the course of making and improving, the timber is not heavy, the surface rolling; and in a few years the landscape will present a scene of beauty and plenteousness. Mr. Hume is of opinion that planting wood must be ultimately resorted to on the old cleared lands for shelter and domestic use, when the culture of winter wheat may probably be resumed with former success. In this view we have found many to coincide. With respect to the attacks of the midge in spring wheat, Mr. Patrick Wright holds a strong opinion, which is sustained by Mr. John Wade, and others, that late sown Fife will almost invariably escape the ravages of that insect. We understand that it has been found in this section, in numerous instances, that wheat sown in the end of April or beginning of May, has been greatly injured or wholly destroyed; while that sown later has escaped. It will be important to collect a number of well authenticated facts in relation to this question, so as to admit of safe generalisation.

We regret having so little time with Messrs. Patrick Wright, Reddick, Alcorn, and others, whose farming operations would have afforded us much pleasure and information to have seen more in detail. Mr. Wright was the introducer a few years ago of the Alsike Clover, which is becoming more and more known and appreciated. He cultivates root crops pretty extensively, and is experimenting with different manures, the results when obtained, it is hoped will be made known. Mr. Roddick is well known for his excellent Durham and Galloway cattle. We saw some good Leicester sheep, a breed that is generally much liked in Canada, and in which there is much room, in many places, for improvement.

After spending an hour or two with Mr. John Wade, of Port Hope, who must be classed among our early agricultural improvers, and taking a momentary glance at his highly cultivated and well laid out farm, with some beautifully looking green hedges and ornamental shade trees, we took rail for Toronto, very much gratified with the journey.

A VARIETY OF GRASS.

EDITORS OF THE CANADIAN AGRICULTURIST: *Gentlemen*,—I enclose you a specimen of a kind of grass I have found growing on my farm. I do not know its name, or the order to which it belongs, nor have I ever seen it elsewhere. The stalks are about 4 feet in height, springing from a dense growth of leaves, the leaves themselves spring up from the roots of the stalks, altogether forming a

dense tuft of luxuriant vegetation. If this grass could be cultivated, and be made to cover the land as the specimen on my farm covers its $1\frac{1}{2}$ square foot, I think it would be next to impossible for weeds to obtain a footing among it. What I would like very much to know is—what would be its value as food for stock, and if its cultivation on land infested with the Canada thistle and other noxious weeds would have the effect of keeping in check or destroying them? I think, from what I have seen in this township, in Vaughan and York, that this year deserves to be noted as a year of weeds; the Canada thistles in particular, encouraged by the most reprehensible ignorance, indolence, and neglect of the proprietors of the soil, have shown their ugly forms to a most alarming extent, and they are in some instances I have recently seen in a fair way of making a wilderness of whole farms. I should like to be allowed the privilege of a few remarks on this subject in a future No. of the *Agriculturist*.

Yours obediently,

JAMES ELLIOTT.

King, Aug. 15th, 1863.

[The specimen of grass enclosed by our correspondent is the "Cocksfoot," or, as it is most commonly called in the States, "Orchard grass." This grass has been cultivated to some extent in the United States, though but little that we are aware of in Canada. It is a kind of grass that makes a strong rough coarse growth, too much so rather for hay, unless cut in an early stage. It makes an early growth in spring, and is therefore valuable for pasturage, and is much relished by all kinds of cattle, if cropped close to the ground, but if allowed to run up to coarse stalks cattle do not like it. It also produces an abundant aftermath. We are not aware that it would have any particular value in preventing the growth of weeds; in fact from its tendency to grow in strong, isolated tufts, it might have rather a contrary effect, unless sown along with several other varieties of grass and clover. The cocksfoot is considered one of the most valuable varieties of grass in England. The seed may be obtained at the seed stores in this city. It is very light, and is sown at the rate of one to two bushels per acre, mixed with other sorts. We shall be glad to hear from our correspondent again on the subject. He proposes to write upon.—Eds.]

ON THE BREEDING OF HUNTERS AND HACKS.

By HENRY CORBET.

(From the New Part of the Bath and West of England Society's Journal).—Concluded from page 292.

We must, then, insist on the conditions as advised by this society for "a thorough-bred allion to get hacks," as the main principle to be followed. Such an animal, as I have already intimated, need by no manner or means have been a famous racehorse—a fact that of itself would go to place him beyond our limit, at the same time that it is anything but an indispensable item in the qualifications. The chief things we have here to look for are true symmetry, good action, a staying pedigree, and freedom from hereditary taint. A deep frame, a round barrel, on a short, wiry leg; a sensible rather than a "pretty" head, a well-laid shoulder, a good back, and plenty of bone. Never mind if his powerful quarters do droop a little, so that they run down to big clean hocks and thighs; and do not care to dwell too much on an accidental blemish, or even a fired fore-leg, so that the leg itself is of the right shape and calibre. Above all do not mistake mere speed for power, and in the thorough-bred horse, as well as in all others, go for wire, muscle, and breed, in preference to what may look like more substantial qualities. In this respect some of the favourites of the show-yard, who are called up to decide over sheep, pigs, chaff cutters, and other stallions still require a little tutoring. The "what to avoid" we must guard against is, flashy strains of blood, that are of no value and the T. Y. C., and hereditary infirmities of all kinds. Bad eyes, bad wind, bad hocks, suspicious ring-bone-looking fetlocks are all bad things in a stallion, the more especially if you can trace them. A horse may be blind from an accident or ill-treatment, and one of our eminent veterinarians has assured me that he did not think there were half-a-dozen stallions in England that were not roasters. The injudicious manner, however, in which many stud-horses are still kept, what with high feeding, hot stables, and little exercise, might account alike for the diseases of the eye and the respiratory organs. Beyond what you may deduce from actual experience, it is always as well to look back a little into the genealogy of the thorough-bred horse. Some lines, for instance, are notorious for the noise they make in the world. Humpback, the sire of the famous Melbourne, was a bad roaster, as was Melbourne himself, and so were many of his sons and grandsons. Another celebrated Newmarket horse was known to all his stock with a tendency to ring-bone, and weak hocks give way as soon as you try to get on. There are clearly admitted exceptions: a ne-blind stallion will get animals remarkable for good eyes, and a thick-winded horse will not reproduce this in his progeny; but, as a rule, wind, eyes, and hocks should be the

three essentials of anything sound enough to bear in mind the sort of mares such a horse is to breed from, be it either sire or dam. I would not so much declare for a big horse as against a fair sized one; and the saying of a good big horse being better than a good little one is not quite such a truism as it sounds to be. Fifteen two or fifteen three, with bone and substance, is big enough for anything; and when we come to bear in mind the sort of mares such a horse is to be put on, it is perhaps preferable to anything higher. For my own part, I go very much with the Cline theory, which says, "It has generally been supposed that the breed of animals is improved by the largest males. This opinion has done considerable mischief, and would have done more injury if it had not been counteracted by the desire of selecting animals of the best form and proportions, which are rarely to be met with in those of the largest size. Experience has proved that crossing has only succeeded in an eminent degree in those instances in which the females were larger in the usual proportion of females to males: and that it has generally failed where the males were disproportionately large. When the male is much larger than the female the offspring is generally of an imperfect form." It must be some such opinion as this which causes that rare sportsman, the venerable Sir Tatton Sykes, to breed from none but small or moderate sized sires; and I believe that the cross of the Exmoor pony with the thoroughbred horse would be yet more successful were the latter only more proportionate to the size of the mares. It would be pleasant to hear that Lord Exeter had lent handsome little Midas to his old neighbour of former days for a season or two, when we might expect to see in the produce some of the most perfect hacks ever backed. Not the hideous, vulgar, heavy-shouldered, loaded neck, Prince Regent kind of cob, but a little pattern of beauty and strength, with style, substance, and action really fit to carry a king. Such a hack as this would soon outplace even the Prickwillows and Phenomena, already going out of use for the saddle, now that men travel to meet hounds in first-class carriages, and the feats of Dick Turpin and "The Squire" are fast becoming mere matters of hearsay. Like the modern hunter, the modern hack must be well bred, and the council have done right to couple the two in the requirements of their stud-horse. If a country breeder wishes to ascertain for himself the description of the riding horse that is likely to make the most money. I would recommend him to stroll into Rotten-Row, between one and two, during the approaching season, where he will find here again how "blood will tell," and what Mr. Rice and Mr. Quartermaine have to go in search of.

Will the man who means to do better and give nag-breeding a fair trial be good enough to bear in mind that much of all I have said as to the sire applies equally to the dam? Let there be some shapo and make, with health and

action, and the same warranty as to wind, eyes, and hocks. With rarely any pedigree to fall back upon, appearance and soundness must be the chief recommendation of the farmer's mare: and even such a verdict based upon such conclusions must not be too hastily arrived at. Many a comparatively mean looking-one has before now thrown the best of stock, as that peerage of their order, the *Stud Book*, would assure us: mares that need carefully looking into before they are condemned or passed over. To give an illustration, however, direct to our purpose: about the grandest cock-tails I ever saw were Mr. Foster's *Combat*, *Challenger*, and *Nike*, all capital runners at welter-weights, and all the children or grand-children of, I am assured, as common-looking an animal as could be. The old mare had, no doubt, much within her "that passeth show," brought out as this was by the cross to the thoroughbred horse. In fact, if the dam be but clear of hereditary unsoundness, and with good action, I do not think we should be too scrupulous in asking the tenant to send nothing but the great, fine, slashing mares which they would, as half-bred, be scarcely justified in buying up. A friend in Devonshire has sent me a few lines on the way in which the "packhorse" answered to the superior cross, that I must give here as especially in place in a west of England journal:—

"The true pack-horse is extinct, and has been ever since my horse-recollection, that is, for about the last twenty years. The animals then going, in 1840, called 'pack,' were out of pack-mares, but their sires had crosses of blood of Yorkshire. Old Gainsborough, the thoroughbred of household notoriety in Devonshire, one who flourished somewhere about 1830, is generally credited with *never having got a bad one*. I attribute this to being the first cross with the true old pack-mares; and I believe that any moderately good thoroughbred would have produced a similar result, could he have had a chance with the same sort of mares. The animals resulting from Gainsborough and these pack mares—and I have several in my mind's eye—were perfection in make, shape, and action, weigh-carriers, everlasting, perhaps scarcely speed enough for the present fashion of spurting across the grass counties, although safe to shine through a severe thing and be at the finish. This Gainsborough generation of riding horses has also gone, and *no young Gainsborough cocktail stallion ever got a good horse*. It is a public misfortune that the line of the old pack-horse has not been continued in a pure stock, both for his own excellent inherent qualities, and for the value of the first cross with the thoroughbred. The big half-bred mares of this cross put again to a good sound, thoroughbred sire produced the animals to go the pace and carry the weight brilliantly in any country, and this is my pet process for a breeding line."

Of late years the west country farmers appear to have been crossing and re-crossing out of all

rhyme and reason, until they have nothing left but the horse of all-work, which, as amusingly demonstrated at Truro, they hardly knew how to class, either as a riding horse or as a common draught-horse. However, as my friend adds, "Every Devon farmer, as a rule, breeds or tries to breed riding stock, and as a consequence, in some hole-and-corner holdings a stylised, promising nag colt is often dropped upon where a stranger would think it about as likely to find an elephant."

So much for a fitting foundation. But let the thoroughbred stallion, under the countenance of the Hunt, be ever so well adapted for his purpose, and the mare really worthy of his caresses, the business of breeding is yet only in the beginning. Better-bred stock require better treatment, and pay better for it. Half a horse's goodness, as it is said, goes in at his mouth; and it will be idle for farmers to attempt rearing riding horses without they do them a deal better than, as a rule, they hitherto have done. A half-starved foal never forgets it; and from the day he is dropped he must be the object of some care and attention. Does the dam give a good supply of milk? Does the young thing look as if he was doing well? Let his feet be looked to, as he grows on; and, above all, let him be well kept, have a fair supply of corn, comfortable sheltered quarters, and so forth. I am no advocate for ever-coddling, nor would I wish to see the hunting colt brought on as if his mission was to win the Derby; but liberal rations, kindly treatment, and gentle handling will all tell by the time he is first led into the show-ring, or delivered over to the breaker. I confess to have some dread of that same country breaker, with all his wonderful paraphernalia and apparently indispensable habit of hanging about public-houses, as a means of making young horses handy. No man needs more watching; and as I have just intimated, a vast deal may be done towards making the young one temperate before ever he reaches this trying stage in his career.

The horse is by nature a social animal, and especially after weaning, two or three of the foals will do better in company, due care being taken that any one of them does not become much of "the master pig," and get all the good things for himself—to correct which they should be separated at feeding time. When together they will challenge each other to "strike out a bit, whereas the solitary mopes about with a little incentive to try his paces, and is much like a boy brought up at his mother's apron-string or a young fox-hound that has lost his friend. I should hope by this that a duly-qualified veterinary surgeon is within hail of most farms, and I would leave it to this gentleman to thin his eye occasionally over the little stud, arrange the proper period for castration, and other detail that will necessarily have to be adapted to time and place. On any such minutiae of matter it is not within my purpose here to en-

even if it would be profitable to do so. This paper rather professes to deal with the great principles of breeding riding-horses, and in seeing these carried out with a little more heart and judgment than they generally have been.

One word more for the veterinarian. Nothing can be more wholesome than the regulation which, after considerable discussion and division, the council of the Agricultural Society are still able to insist upon of part of their proceedings—viz., that every horse entered for exhibition shall be examined and passed by a duly appointed veterinary surgeon previous to his facing the judges. It is true that the latter should and might be able to reject an unsound animal without such assistance; but their edict would not carry the same weight, especially with the disappointed owner of a disqualified horse, as the professional opinion of the collegeman. It is scarcely fair, in fact, to place gentlemen who gave their services to the society in so invidious a position—one that often renders them liable to much gratuitous abuse. I would not, however, have the veterinary inspection of the meeting in any way interfere or intrude upon the judges when at work. His duty is to see that none but sound horses go before them, and there to limit his responsibility. Sometimes it will happen that the judge will associate the two offices in his own proper person; but, as a rule, it is better that the society should appoint its own veterinary surgeon; and I would recommend that this course be adopted on the inauguration of the thoroughbred premium of Exeter. Of course such an examination should not be confined to the stallions, but extended to every class of horses in the entry. It is somewhat significant to reflect how resolutely this plan has been resisted in certain quarters, and by certain exhibitors, not merely at the meetings of the Royal Agricultural Society. I know at this moment of a country show of some repute where the presence of a veterinary inspector has been for years successfully tabooed, until the number of unsound animals exhibited has just come to create some alarm for the character of the breed. I am speaking here rather of cart-horses than riding stock: while I am glad to see that a leading member of the direction has put himself to reform this too flattering fashion of making up a show and that a preliminary veterinary examination will henceforth be embodied in the rules and regulations.

It is very clear that within the last few years the proper stimulus has been given for breeding a better description of "nag-horse," and I am sanguine of still-continued improvement in this way. I have seen most of the famous horse shows, and had the pleasure of being present at that grand meeting at Middlesborough, where the first hundred ever offered was won by Lord Zetland's celebrated Voltigeur; from the great success of which occasion the national association, but two years since, was induced to insti-

tute a similar premium. The Bath and West of England Society is now promptly following in the same course, and with every prospect of this very agreeable feature in the business of the farm being more systematically developed, with proportionate advantage to the breeder and credit to the country.

Agricultural Intelligence.

THE ROYAL AGRICULTURAL SOCIETY'S SHOW AT WORCESTER.

The twenty-fifth annual Exhibition of the Royal Agricultural Society of England took place in the immediate vicinity of the ancient and picturesque city of Worcester, July 13th, and, with the trials of implements, occupied the entire week; and upon the whole it is said to have been a remarkable success, though the Society, it is understood, will be some hundreds of pounds out of pocket. With the exception of Leeds, (leaving Battersea, which was international, out of the question) the Society has never before drawn so much money for admission as it did at Worcester. The total amount received up to Friday evening was £6,310. The admission to each person on the Monday, when the Judges were making their examinations, was ten shillings, amounting to upwards of £400. Tuesday and Wednesday the admission was 2s. 6d., amounting together to a little more than £2,000; while the shilling admissions on Thursday and Friday reached the munificent sum of £3,715. The four implement trial days yielded only £67. For the last two years Members (subscription £1 a year) have been admitted free; formerly they paid the same as non-members; their only privilege being their receiving the Society's Journal gratis.

As this important national society has just completed a quarter of a century, the following table, compiled from statistics furnished to *Bell's Weekly Magazine*, will be consulted with interest by many of our readers, affording data by which to measure the progress of the Society; and it is pleasing to remark that a career not less instructive and prosperous has characterised the history of our Provincial Association of Upper Canada.

Date.	Place.	Paid for Ad'n.	Implement Exhibitors.	Cattle Ex'd.
1839,	Oxford,	£	....	350.
1840,	Cambridge,	....	....	451.
1841,	Liverpool,	....	....	463.
1842,	Bristol,	....	84	497.
1843,	Derby,	....	113	608.
1844,	Southampton,	2432	90	716.
1845,	Shrewsbury,	1682	98	527.
1846,	Newcastle,	2168	110	775.
1847,	Northampton,	2473	142	580.
1848,	York,	2514	146	866.
1849,	Norwich,	2360	145	799.
1850,	Exeter,	2493	118	769.
1851,	Windsor,	3397	....	1226.
1852,	Lewes,	1184	105	828.
1853,	Gloucester,	2734	128	931.
1854,	Lincoln,	3378	130	931.
1855,	Carlisle,	3200	121	1076.
1856,	Chelmsford,	2988	151	906.
1857,	Salisbury,	3447	166	1462.
1858,	Chester,	6187	197	1444.
1859,	Warwick,	5459	246	1601.
1860,	Canterbury,	2689	204	981.
1861,	Leeds,	9855	358	1027.
1862,	Battersea,	9540	342	2000.

The Society had no Implement Show this year, which was merged in the London International Exhibition.

The trial of steam ploughs and cultivators commenced on Wednesday; the competitors were Messrs. Fowler, Coleman, Smith, Howard, Stevens, Savoy, and Hayes. Savoy used one of Fowler's ploughs, with his small set of digging tackle. The work is described as all that could be desired. Stevens tried his plough and cultivator, but without success. On Thursday, Fowler, Savoy, Smith, Howard, and Coleman started to use their cultivators in a lea-field. Here Coleman's implements gave way at starting, and worked no more that day. After the others had finished cultivating, Fowler, Howard, and Savoy started their ploughs. Fowler's work was unexceptionable. Smith used his compound drill and cultivator, but the ground was not in a suitable state for its proper working. The judges then requested Mr. Fowler to use the digger, which made good work. This ended the trials for the best apparatus for small occupations. On Friday morning the race started for the gold medal and £50 prize for the best application of steam power to the soil in a field of clover. Fowler, Howard, Smith, Savoy, and Coleman, were directed to use their cultivators. Smith and Fowler here made very good work, also Coleman; but one of his grubbers again broke,

and he withdrew from the contest. Fowler next made some capital work with his digger, using two engines. The ground chosen was a very tenacious clay of a nature to test fully the efficiency of implements for steam cultivation. Fowler, Smith, and Howard were set to work in a field of stiff cold clay that had been in pasture for eight years. It had been predicted by many that none of the implements would work in it, which, fortunately was not so, although Howard and Smith did only light work. Fowler's digger worked to the astonishment of the spectators. Most decidedly better work could not be done. The soil was moved about 8 inches deep, and left in pieces lying in all forms, many pieces striking up from one to two feet above the original surface. The chief novelties amongst the different sets of steam tackle were Messrs. Fowler and Savory's, each working two engines with one implement, a plan likely to come into use in some districts, and for letting out for hire. Other results from these trials will probably hereafter come to hand which, if of sufficient importance, we shall not fail to lay before our readers.

We subjoin an abridgement of a very elaborate report in the *Mark Lane Express* of the Live Stock department:

The meeting opened well, as rarely have the preliminary proceedings commanded more attention; and this, too, in the face of the assertion that, whether the premiums for stock be persevered with or not, it was high time that such a system of rewards for implements was abandoned. Our special reports will tell how the trials of the steam cultivators were watched, and the performance of the steam engines analyzed, not only by the judges, but the public. It is indeed, doubtful which of the awards that we were enabled to give on Monday last would create the most sensation in the country. For our own part, we believe that the highest honour for steam-ploughing would be more talked of than the best shorthorn bull or first thoroughbred horse; and a national congress of agriculturists, without any such wholesome stimulus to turn to in its programme, would have been but the awkward movement of a body with a limb lopped off. Not, however, that the taste for good beef and mutton is by any means dying out; and many a stranger, as he entered the wide and well-mapped show-ground, anxiously asked his way to "the beasts"; hurried through, with just a passing glance, the handsome avenues of machinery, and curtly declined the many offers to take a list, or look at

plough, until he had satisfied himself as to who was first for Leicester, or best man amongst the Cotswolds? And here, if we did allow our friend picking the plums out of his pudding at once, we might send him amongst the sheep, the strong feature, taking all kinds and classes, of the whole Show. The foundation, moreover, was good, as seldom have the recognised breeders, either Leicester or Southdown, been better represented; while the Cotswolds made again a grand stand, and the Oxfordshire Downs proved yet more worthy to some rank of their own. Either for numbers, or individual illustrations of their order, we must repeat that the sheep classes were the best section of the Show; and such entries as Colonel Inge's pen of Leicester ewes, Lord Walsingham's Southdown shearling, and Mr. Robert Garne's Cotswold rams, may have been previously equalled, but they have certainly never been surpassed as perfect specimens of their several sorts. In distinguishing these entries the judges by no means kept to any previous precedent, and it reads somewhat untoward, that in his last season, and just previous to his final sale, Mr. Sandy should have been so signally defeated as he was at Worcester. Still, it is consoling to feel that the Holme Pierrepont ranked only as second in one of the best general exhibitions of Leicesters ever got together; and Mr. Sands was but beaten with his own tools, as Colonel Inge has long continued to breed from these Nottinghamshire sheep, while his very shepherd comes from the same fold. Both the classes of rams were of a very high character, with very few indifferent entries amongst them, as the many commendations of our prize list will testify. The Thorpe Constantine shearling, of good size and admirable quality, is very perfect, and it would be difficult to pick a hole in him; while the five ewes from the same flock are the best pen of Leicesters ever seen together. Of remarkable uniformity, with sweet thorough-bred heads, great width, fine size, and a capital touch, they are clean away from the rest of the class; as Mr. Sandy's seconds were not up to his usual standard, being only a middling lot, very delicate in appearance, and lacking something in size and growth. Mr. Borton, who has been in the habit of using rams for Sledmere and Holme Pierrepont, won everything with the old sheep; but his third prize ram was bred by Mr. Sanday, and is still further noticeable as the sheep over whose place at Battersea some rather angry discussion ensued, but where by the way he occupied amongst the shearlings precisely the same position he now claims amongst the all-god rams. Mr. Borton exhibited only three in this class, and the first and second prize sheep were both bred at home. The best of the three, which was the best shearling at York last year, was a ram of great style, with good substance, active and cheerful in his character, and with famous touch. The strength of the Leicesters may be in some instances estimated by the

fact that so well known a breeder as Mr. Geo. Turner sent several sheep, not one of which received any special notice from the judges.

Amongst the Southdowns there was some similar upsetting of great reputations. The Hove flock, for instance, was declared to have gone back, the rams having coarse heads and bad shoulders, with a certain delicacy about them that Downs are too apt to run into; so that, with the eight sheep shown, Mr. Rigden reached no higher than one commendation. If, however, one man had gone down, another had come on; and the extraordinary improvement in Lord Walsingham's flock was the sensation of the meeting. His Lordship would appear to have at last brought the Southdown sheep to something like a standard of excellence, uniting style and quality with good size; and with, as the index to his advancement, his first prize very generally pronounced to be the best shearling of the breed ever exhibited. But this one was by no means suffered to stand alone, as the other half-dozen shearlings from Merton were almost equally commendable for the three great points of pedigree, mutton and wool; on any of which considerations proportionate progress was observable, with five out of the seven individually complimented by the judges. Since the dispersion of the Babraham flock the late Mr. Webb's man has accepted service at Merton; and, as a consequence, the very common remark was that, "It's all the shepherd's doing." Fortunately for those who believe there is still some art and judgment necessary for breeding as well as for feeding or trimming, there was some other proof in the Worcester Show-yard that it was not quite all the shepherd. Thus, the first prize aged ram, now upwards of four years old, is the father of the first prize shearling, of the second prize two-year old sheep, and of three of the ewes in the first prize pen. He is, again, the father of the Yarmouth and Hamburg first prize sheep; and, above all, was bred by Lord Walsingham at Merton. Still, the career of this famous ram has been somewhat chequered: as a shearling he was first at the Norfolk Show; and as a two-year first again at home, and third at the Royal meeting at Leeds. As a three-year-old he was only highly commended at Battersea; though at Dereham, a week or two afterwards, we thus wrote of him: At Battersea in the old class the Merton rams were second, third, and commended to Mr. Rigden's sheep; whereas at Dereham the second and third were precisely in their former places and the Royal commended sheep *first!* Mr. Woods all through maintained that this is the right reading of their several merits, and general opinion was again with him against another bench of Battersea martyrs." This was written a year since, but it is all equally applicable now that the father of the flock has further asserted his superiority, though he leaves them in his old age, having been sold previous to his Worcester triumph triumph to go to Wurtemberg. There

was no cavil whatever as to the Norfolk Downs having it all their own way, and Mr. Rigden took his beating like a man; the only discussion whatever being over the third and fourth pens of ewes. Lord Walsingham's first were here again about the best out for many a day; capitally matched, with plenty of mutton of fine quality, and wool of undeniable texture; while Messrs Heasman's next best had beautiful heads and necks, with famous legs of mutton at the other end of them, their chief drawback being that they were rather over or badly trimmed. Three of Lord Radnor's five were really admirable ewes for almost any point, size, mutton, or wool; but a want of thorough uniformity in the whole pen stood in their way, and the third prize went to some rather small and delicate sheep of Mr. Farquharson's, but still far away the best that the old Dorsetshire Squire has ever yet set his seal to. The three classes of Southdowns, with such exhibitors as we have referred to, or that the commendations make special mention of, were altogether of a very high order of merit, though disfigured by the presence of a few sheep that had no pretensions to any place in a Royal show-yard.

Still, despite the stand they are still able to make, there is little question but that the old-established firms, like the Leicesters and Southdowns, are gradually losing some of their business, which is going over to such opposition houses as the Cotswolds, Oxfords, Lincolns, and other Long-wools or half-breds. Of these the Cotswolds and Oxford Downs supplied two wonderfully good lots of sheep, the former quite up to their previous repute, and the latter coming to the fore very fast. Never, in fact, was the grant of a class more fairly earned or better supported. The Oxfords, indeed, have a deal of good about them, either in the way of mutton or wool; and in the best flocks, moreover, there is an increasing uniformity of style that speaks to the care with which they are now cultivated. So far, in fact, as Worcester was concerned, the show of the sort was highly encouraging in every respect but one, and that was the shameful way in which many of the sheep were exhibited, the abuse being heightened by some of the worst cases winning the best prizes. It was good to see Mr. Bryan placed first with I fairly clipped clever shearling, though he was only a second at the recent Oxford Meeting; whereas Mr. Wallis' old rams looked as if they had not lost a lock of wool since the day they were lambed. The Duke of Marlborough's ewes, again, may be fine animals; but the judges must be wonderfully "up" in feeling for make and shape if they could exactly say what they were through the mass of wool in which they were smothered. Of course, conscientious men like Mr. Charles Howard and a few others have but little chance, while the Society permits of its representatives in the ring aiding and abetting such monstrous evils as these—practices that tell alike against the conduct of the

Meeting and the character of the sheep. Breeders of other varieties turn away with a smile of contempt from these hapless Oxfordshire Downs, sweltering in a July sun under a two or three year's fleece. They must be bad-framed animals, indeed when their bad points require such elaborate concealment; or, at least, that is the palpable argument which the world will draw from the heavy overcoats so much in fashion with too many of these Oxford mixtures. There were upwards of fifty shearling Cotswold rams entered, and mostly of that grand imposing appearance, for which of late years they have been so celebrated on the show ground. There are certainly, few sheep that tell more when put upon parade, the besetting sin here being still to overmark many of them in the way of condition, or otherwise the Worcester example was very commendable for general excellence, there being perhaps no other so even a lot in the whole catalogue. From some cause or other the Lincolns make no great impression on the show-ground as compared with their accredited worth in the market, and there were no classes at Worcester that attracted less interest than this company of Other Long-wools. Three very good classes of Hampshires and other short-wools owed much of their excellence to the presence of a new exhibitor at the Society's meetings—Mr. Rawlence, who opposed even Mr. Humphrey with quite his share of success. In fact, the three pens of ewes from Bulbridge were the finest lot of West Country Downs ever brought out, and the first five very admirable for nice stile, coupled with good useful qualities:

Firm as has been our faith in the Shropshires, they have not made that general advance of late which we had expected, and there is not much progress to report at Worcester. Either there is no reliable type, or the judges go by very different roads to get at it. Here they went all for magpie faces and speckled legs, and more for mere size than symmetry. Mr. Stubbs' first prize shearling, although with some good blood in his veins, is a very uneven sheep, standing badly before, and nothing extraordinary from behind. He began public life early, however, and was a prize-trimmed lamb at the Staffordshire Meeting last year. He will now, probably, go on hire to Lord Shrewsbury, while one of Mrs. Baker's very sorry lot crosses the Channel for Ireland.

There was, of course, more direct argument for the strong show of Hereford cattle, indisputably the most evenly excellent entry of any breed on the ground; although in mere numbers these did not exceed the Battersea complement of something under a hundred in all. True in their frames, wealthy to handle, and handsome in appearance, the first class of old balls at once betrayed the "weakness" of the white faces: from sires to sons, or cows to calves, there were but too many over-fed; and one or two as we hear and hope, really set aside as too

fat for any becoming example of what a breeding animal should be. Both the first and second prize old bulls were alike equal to this objection; but Plato carried his beef more equally distributed, and had altogether a more active, lively look than Sir Oliver, very palpably over-marked, and as short of hair as if it had been singed. He has, otherwise, many of the points of a grand bull; but, for a combination of quality, symmetry, and usefulness, we are still of opinion that the first and second should have been the other way; and the judges themselves were quite open to discussing the question. Lord Bateman's bull is short and thick, but with something very attractive about him, and Raglan was worthy more notice than he received. The next division was a class of as good animals as are often seen togeth'er, with Mr. Taylor's Tambarine quite the best bull in the Hereford classes, combining those great requisites of the present day, size, quality, and substance. Moderator, the second best, has good length, but somewhat with hardly enough of grandeur about him for a prize bull; and more attention ought to be paid to style than to a mere lump of flesh. There were such a lot of famous cows, that for size and quality have rarely been matched; indeed the first prize one of Mr. Wm. Perry, of Cholstrey, with a calf a few days old by her side, was just what one would like to see more of; and the second also a very good one; while Mr. Duckham's eight-year-old cow would do credit to any herd, as it is rarely we see a Hereford attain that age without getting very patchy. Perhaps, with the years upon her, this was almost the best cow in the class, and she might have been placed higher in the list. A commended cow of Mr. Turner's did not appear to have done much towards increasing her owner's stock of cattle, but nearly all the cows shown were as a class good, and must be considered a credit to the breed. The in-calf heifers are usually the best class of the sort, but here they were not so well up to the mark. Mr. William Tudge's nice thick heifer has a rare lot of hair, but is not a very good one to meet, nor are her head and horn quite right. The second is not of a good colour, being lighter than is now quite the fashion; and Major-General Hood's highly-commended heifer, with rare thighs, back, and rump, was still not fine enough forward; while two heifers shown by Mr. Thomas and Mr. Williams were thoroughly spoiled from over-feeding.

With nearly double the number of entries, as compared with the Herefords, and reaching in all to somewhere about a hundred and eighty head of cattle, the Shorthorns were by no means so even a sample of their sort. On the contrary they were a very ragged lot, with a number of drafts in almost every class, and scarcely one grand animal amongst them. It was not, in fact, until we had travelled on to Mr. Eastwood's white yearling bull, The Hero, and had coupled him with our old acquaintance of many

a meeting, Lady Pigot's Pride of Southwicke, that we came to anything like really "Royal Firsts." Still, the best old bull, Mr. Wilson's Duke of Tyne is a well known winner in the north—at Hartlepool as a calf, at the Durham County, and at Belford; while he is by Cœur de Lion, a bull that Colonel Townley sent up for the use of his north-country tenantry. Then, Mr. Wilson himself was not only one of the Judges of steam-ploughing at Worcester, but the acting Secretary to the local committee that a month or two back secured a second visit from the Society for Newcastle-upon-Tyne; so that even beyond his personal appearance the prize bull has many contingencies in his history. There is no question, either, despite one of the judges declaring against him, that he was the best of his class on Monday; and when seen out is a very telling animal. With great size, a deal of character, and of good quality he is wonderfully fine forward, and would be a very imposing animal to meet, but for his long plain effeminate head, which must always be a strong point against him. General Murat was also second at the York show last year, where we spoke of him as showing more use than style, a point in which he is still terribly deficient. In fact, instead of preferring him to the Duke of Tyne, the general opinion was that Mr. Brawn's lengthy and handsome young Radford should have had second place. Amongst the commended Mr. Clayden received no notice for his elder Marquis of Cornwallis, while Lord Feversham's blood-looking bull showed a deal of his sire's high quality and temper. If this all aged class did not evince any extraordinary form, the younger bulls were yet more moderate; and the winner, Hemlock, plain and narrow, with a coarse coat; and bad either to meet or to follow, was continually objected to; Mr. Peel beating him for symmetry, style, and promise. The third prize introduced us to another of the Butterflies, but one with just the family character—light, airy, and all breed and fashion. In the next division we pause before the shorthorn bull of the show a yearling with hardly anything but his colour (white) to be offered against him; level and long, with capital hind quarters, good ribs, and a famous touch, The Hero should go on, for he is by no means over-marked as yet; and his place thoroughly due to a happy combination of such essentials as symmetry, growth, and quality. He is as yet a very young one as compared to many others in the class, and at all points but sheer forcing a very superior animal to the gold medal white of Battersea-fields.—Still, another Butterfly, light, leggy, and stylish, was declared to be a close second; while a more clumsy one, of something the same kith and kin, with the dreadfully clumsy title of "French Butterfly's Cœur-de-Lion," was an indifferent third. What a name for a herdsman to handle, or even an editor to book! In the large class of Calves Sir Anthony de Rothschild tasted first blood with a very clever one—fine

in his coat, famous in his quarters, good in his bosom, and remarkable for his quality; but Mr. Garne's second, light, narrow, and common, was less liked; and Pretor, with plenty of Bates' character, showed the family failing of forward shoulders. Only five cows were entered, and we thus wrote of the first and second on meeting them at Exeter a month or so since: "The Pride of Southwicke, who never looked better, promises well for Worcester, where she may even improve on her previous place at the Royal; but the Maid of A'kens has got a little gaudy behind—always her worst point, and we do not expect to see her again with anything like her pre-eminence at Wells and Battersea." It was in truth only the weakness of the class that let Mr. Lane's cow in for second at Worcester; Lord Spencer's with some fine points about her, having gone all to pieces; and being no longer fit for "the flags." Both the prize heifers, also the deep, sweet-headed Rosedale, and the neat, well-finished Queen of the May, look more like qualifying for Islington than breeding-purposes; while Colonel Towneley's couple of beautiful Butterflies would promise to be of more service in the herd, and hence may be, their secondary honours in public. The Duke of Montrose's yearling, or just upon two-year-old heifer, is again all forcemeat, and certainly an extraordinary example of what may be done in the way of high-feeding; though encased as she is in fat, still said to be seven months gone in calf.—As with the Herefords, the extra premiums for pairs and family parties were not successful, and the Queen of the Ocean and Soldier's Bride, as full of good fat beef as a butcher's shop in Christmas week, furnished something very like a burlesque on what the Society does in the way of milking cows. These were pushed off into the Other Breeds, where Mr. Bloxside, with a hand and heart for the good firm flesh of a Hereford, would look at nothing beyond a Longhorn, a Runt, or the Norfolk and Suffolk polled—the latter in some force—and on the strength of being good milkers carrying all before them. The exhibitors, however, of the Channel Island Cattle are anything but satisfied, maintaining that they have purity of breed to begin with, and that butter and milk-producing animals are entitled to some distinct recognition from the Society. They say, further, that it is mere folly to show a milking cow against a fattening beast, especially with judges who know of, or prize nothing but beef. On these grounds a deputation had an interview during the week with Mr. Hall Dare, when they suggested, or, rather, directly solicited, for separate classes for the Alderneys and Jerseys, backing their prayer with the fact that more of these cattle, even under present disadvantages, were sent than of the Sussex beasts, where, in a special class, twelve premiums were handsomely offered for just about as many entries. The general show of the Islanders, however, was not so strong as Battersea, and the Guernsey's were altogether

indifferent; but Mr. Gallais' Jerseys were far better, and his third-prize heifer a very pretty specimen of her breed; while Mr. Dumbrell's prize bull, another good one, found a purchaser early in the week in Lord Binning. The weak place in the Prize List is no question this lack of any encouragement for the best milk and butter; and though the Society does travel north next year, we trust that the prayer of the petitioners will be entertained, and a Channel Island class established. It would be sure to be popular especially with the general run of visitors.

The show of Devons was to a great extent but an echo of that at Exeter, so that it would seem such leading men as the Davys, Quartleys, and Halses have this year really nothing to send. Mr. Newberry's Prince Jerome, as we wrote of him at first sight, is "a deep square blood-like animal, with fine flesh and a beautiful bull's head and bright eye"; and the famous Viscount "in better form than at Wells, has still never thoroughly recovered from his early forcing; and though a great wide bull, has grown out of shape, with a loose, bad quality when you get your hand upon him." These two come into direct competition at Worcester, with Prince Jerome still first and Viscount second. There were only four bulls in this class, and only two in the next, where Mr. Surman was first, with a lengthy, true-made animal of high character, from the herd of Mr. George Turner, who was himself a winner with the thoroughbred Drone (though his commended Trumpeter was of better quality) as well with the pretty little Devon-iensis, and a heifer calf. The Royal herd, however, was very strong amongst the younger stock, and Prince Alfred and the Rose of Denmark proved worthy of their titles. The former is a very promising, straight, lengthy bull, and the heifer very blood-like in her appearance. The old cows, a generally commended class, as it also was at Exeter, included many of the same animals; Young Hebe first in the West, and Golden Drop—two cows which, with the winner Rachel, were got out of so prematurely by Lord Portman; while old Cheerful, "a grand cow still," has been second at both these leading meetings of the year. From amongst the heifers, Mr. Hambro's Lina, "very handsome and useful," was still first and first, with Mr. Perkins' Alice third and third, but Mayflower now put aside for Mr. Farthing's Jenny. Of the younger things, Mr. Butler's, the best female at Exeter, was, of course, still the best at Worcester; and, in fact, as we have said already, the one shown is far too close a reflex of the other. Nothing but General Hood's nominations gave the visitor who had seen the one any inducement to follow out the other; and if we were not quite satisfied with the stand the Devons made in the West, we were the more disappointed with all they could achieve at the great national gathering of the year, and that not so very far from home either. Fifty entries in all, for one of the three established breeds, does not seem

pare well with a hundred Herefords or nearly two hundred Shorthorns. The editor of the Devon Herd Book must look up his champions.

The horse ring at Worcester was decidedly the centre of attraction, in spite of the straight-backed bulls, cloathed cows, improved pigs, or sheep with the whitest of wool, clipped in the "last new style" by the most fashionable and scientific of shearers; of steam ploughs, traction engines, thrashing or washing machines, and the most complicated of rat traps. After all that has been said and sung about the deterioration of the breed of horses, one thing at least was very apparent from the expressions that continually broke forth from not only the men, but the lasses in the crowd after crowd that encircled the ring, viz:—that, if the horse be deteriorated in breed, the Englishman's love for him is in no way diminished, and that we are as proud of him as ever. The roped ring and comfortable boxes, although on a smaller scale, continually reminded one of Battersea, Mr. Tom Pain still being "The Genius," and keeping admirable order in the quietest and pleasantest manner. For the Royal hundred a dozen stud horses entered the arena, all considered by their owners as best calculated to improve and perpetuate the sound and the stout thorough-bred, and which was duly confirmed by the judges highly commending the lot.—Rouble, by Cossack, a neat level, hunting-looking bay, with smallish thighs and hocks; Ancient Briton, a chesnut, very wiry, muscular and lengthy, with shoulder well laid back, rare quarters, short back, long thighs, and hocks near the ground; still he was rather leggy and had not the most agreeable countenance, but is nevertheless a very useful horse; Plum Pudding, a dappled bay, well christened, being a heap of flesh and as round as a dumpling; Malek, a weak-necked, stilty, and flat-sided animal; Cavendish, a rich dark brown, with fine frame, and very muscular—short-legged, and all over a really stout, hardy-looking animal, with fair action, if perhaps a little short in the thigh; Neville, a vulgar looking horse, with a coarse heavy neck, and low harness withers, bad fore-legs, weak arms, elbows in, and pasterns that all but let the fetlock joints on the ground as he threw his legs about; as if he wished to get rid of them—a style of going that ought to have shafted him long ere this into some Lord Tom Noddy's cabriolet. There is nothing like good action; but we do not think that false, flashing, flourishing action ought to be encouraged in the show-yard, because through some ever-varying whim of fashion it now happens to command a price. And we would seriously remind our judges that there are far more graver things to be thought of than the mere capricious tastes of Picadilly dandies, when awarding a prize to a thorough-bred horse for general stud purposes. Let our authorities endeavour to set the fashion, not to follow, by going in for the useful as well as ornamental—for a horse that bends the knee, strikes out from the shoulder, with elbow free,

setting his foot down firm, and at the same time getting over the ground; and not by upholding your flashy Nevilles, throwing their legs about like ballet-dancers— or the pony Tom Sayers, hammering away in the same place like a blacksmith at an anvil. A greater medley never appeared in a ring, consisting of gig-horses, carriage horses, trotting-cobs, clothes-horses, if we may judge them by their wooden looks, and one great lumbering brown, suitable for a carrier's cart. Amongst the better was Sir Peter Laurie, just nineteen years old, and just the very sort of horse we want to get rid of—the modern steeple chaser, a nag with a neck like a giraffe, as Leggy as a foal fresh dropped, with a very light middle-piece, and that gone in the back; yet this was the horse that took the first prize, and that thousands were to carry away in their mind's eye as a model to get hunters! Whitmore, a chesnut four-years old, with a little more bone would have been the sort of horse, though only fifteen-two or three; but two years may yet do something for him. Elliott, a short-legged horse, with a stain in his pedigree, of a strong frame, and showing a deal of character, but short in the quarter, and a gingery mover, with a large-capped hock, took the second honours; and Safeguard, a twelve year-old chesnut, up to as many stone, with the true hunter stamp, but lacking the blood of Whitmore, was the third. The Prince of Wales was lengthy and light; and Solferino long, low, and deep-ribbed, and a good marcher was, barring a heavy neck, not an unlikely horse. Solferino, Whitmore, and the Prince of Wales were ordered out of the ring almost before they had completed the circle; whilst Romley, who had a damaged leg, through getting across an awkwardly-placed bar in his box, had the honour of being kept in to the last, making his own fancy, for a time, the prize was actually going into the land of Bucks! The premium for brood mares for breeding hunters was awarded to Lalarge, a thorough-bred one, with a capital shoulder—a great point in any riding horse, especially a hunter, but a recommendation which, in this class and the others, was rather scarce. Then came the "mares or geldings exceeding four years old, equal to fifteen stone with hounds," which was decidedly the best represented class of the meeting by a very long way, and containing many really fine framed horses. There were in all six-and-twenty, and as they came one after the other into the ring, Worcestershire gave vent to a prolonged note of admiration, "What a fine lot of horses!" But fifteen stone with hounds is a great weight; two stone less would have been more agreeable to many of them. The first prize horse, Mr. Booth's "Beechwood" is up to the weight, with a good shoulder, but greatly disfigured by being fed like a bullock, and having rubbed the hair from his dock. The second best was a nice-looking bay mare, Elastic, with not the best of shoulders nor the shortest of cannon bones.

So far the show of horses was encouraging, and in some classes, such as weight-carrying hunters, remarkably good. With, again, Cavendish first, and Neville anywhere else they choose to put him, the third offer of the thoroughbred hundred would have quite reached its aim; and many of the young riding-horses were commendable. In fact, this section of the show is manifestly improving; whereas, if we are to take Worcester as the test, the agricultural horses are as palpably retrograding, for it is many years since so small or so poor a lot of draught-horses have been brought together under the auspices of the Royal Society. Try them by almost any class of breed you would, and they were alike wanting in numbers and merit. Possibly the Hamburg Meeting operated in some degree against the Worcester, and travellers do assure us that the Brewer and the Clyde horses exhibited on the continent would have been a decided acquisition to our show of last week. The best of the open class, Black Prince, is a heavy, useful animal of great power, and active for his size, but still with no extraordinary merit about him; while the Clydesdale, placed second, is a far truer made horse, and deservedly in general favour with the public; so much so that the judges must surely have had some peculiar reasons of their own for not ranking him higher. The choice of all the draught-horses, however, was Young John Bull, the dray horse, and a very fine illustration of the sort required; of good size, great power, active and handsome, and a long way before the others of his class in all the essential points of appearance and character; although, perhaps, it was hardly fair to try Mr. Neale's smartish three-year-old by the side of the aged and thoroughly-furnished animal. The selected brace of two-year-old dray-horses won against little competition; the other class of two-year-old fillies resulting in no entry, and the mares and foals in but a single nomination, of no apparent merit in either mother or child, and scarcely worthy on any consideration of a Royal first. But it was in the special class of the Suffolks that the falling-off in the cart-horse classes was more particularly observable, only one aged stallion being sent to compete for two premiums, and one mare and foal to keep him in countenance in the companion class. Of these Duke could never have the ghost of a chance at one of his own native shows; but Sir Edward Kerrison's Bragg is of a far higher stamp, being a grand mare all over; a royal winner before now, and the second of her class at the Ipswich meeting a few weeks since. Mr. Ward's fine filly was again first, and May-bird had also a place at home, as well as here, though at the best but a light one to look on. Over the two year-old colts Mr. Barthropp must have been clearly outvoted, as handsome Young Emperor has now to give way to Mr. Mumford's more useful colt, the award the other day showing a preference for fashion—a point in which Young Duke is

singularly deficient. A variety of reasons were offered for the short show of chesnuts, in such woful comparison with the imposing entry of last year at Battersea, prominent amongst which was the want of railway accommodation; the authorities only agreeing to take stock free one way, on the homeward journey, and even then the horses would have to travel in cattle trucks, or the full fare be charged to and fro. It is, though, very clear that the Suffolks must come again in more force, or the class will necessarily drop through. There was some complaint of the cart-horses being calf-kneed; but Professor Varnell, who performed his duties with an ability and good taste, upon which we can honestly compliment him, reports very favourably of the heavy classes, as indeed he does of the horse show, in regard to the important matter of soundness. In the open class of cart-horses there was only one roarer; neither were flat feet nor other defects very numerous. Of the dray stallions there was again but one roarer, but more tendency to flat brittle fore feet; while the Suffolks were remarkably exempt from all diseases, their feet being very good, and the chief failing of the chesnuts a tendency to smallness below the knee. The Professor's report is, in fact, an address of congratulation on the absence of hereditary diseases amongst all other classes of horses, especially the sires, be they race-horses, hunters, ponies, or cart-horses; a gratifying result which he very fairly attributes to the preliminary examination now insisted upon, and that one or two very active members of the Council have done every thing in their power to abolish ever since so wholesome a system was first instituted. It is said, indeed, that one man still threatens an annual motion on the subject!

Professor Simonds was enabled to report as favourably of the freedom of the cattle from disease, as his brother professor of the horses; but amongst the pigs there were many qualifications, attributable, however, rather to the trickery of the exhibitors than to any actual illness in the animals themselves. These were entered under, or even over their proper age, just as it suited, and ingenious were the devices adopted to make up a prize pen of sow and pigs. The Yorkshiremen were the chief offenders, but one well-known breeder from the Eastern Counties was also found, to use the mild phrase of the inspector, to be extremely "careless" about the due record of weeks and months, and he suffered accordingly. The show on the whole, was a fair one, though by no means generally good, the great feature of the different divisions being the Berkshires, which came again in immense force, and furnished the best entry of this breed ever yet brought together. The sow class was generally commended; whilst, beyond the capital pigs of Messrs. Hewer, Sadler, Hitchman, and others, these classes were materially strengthened by Mr. Joyce, of Waterford, whose Berkshires we have so often had to commend in our

notice of the Irish shows. He had six young boars of the same litter, that for uniform excellence have seldom been surpassed, and one of which took a prize, three more being highly commended, and the two others commended. The small white pigs were also very evenly good; and the judges had a deal of difficulty in placing the boars of this division, the companion-lot of sows being equally creditable to their class. The small blacks, on the contrary, made nothing like the sensation they did at Battersea; and the supplementary compliments amongst them did not extend beyond a couple of commendations. The large boars were indifferent, and the competition limited; but the large sows, though few in number, were a capital lot, and Mr. Wainman's Fresh Hope, bred by Messrs. May of Beamsley, an extraordinary animal for size, symmetry, and quality combined. The pens of three of almost any breed rarely ranked above mediocrity, and we did not meet with any of those wonderful match lots, or trio of Graces, that one comes occasionally across when Mr. Mangles is just in the vein. With Birmingham so handy, and Bingley Hall so famous in this way, the Worcester Pig show might have been better.

THE INTERNATIONAL AGRICULTURAL MEETING AT HAMBURGH.

Abridged from the Mark Lane Express.

The Battersea International Show has already had its effect upon the Continent; and the German States have been the first to move. A guarantee fund of £10,000, by fifty-seven persons, first gave the key-note, and the project was set going in October last. The Executive Committee comprised six merchants, three farmers, and one dealer, with the famous Baron Merck as President; Mr. Olde, the dealer, and Messrs. Bieber and Ross, farmers, having also been very active. The show-yard covers 1½ million square feet. The total cost of holding the Exhibition will not be less than £20,000. All the German States, Austria, France, Sweden, America, Denmark, Switzerland, Holland and Belgium are represented by Commissioners: these work by executive committees. The lamented death of Baron Merck cast a sad gloom over the proceedings; but General-Consul Schanseeback undertook the office of President. These committees have been ably assisted by the General Agricultural Society of Germany; and Baron Nathasius, their President, who was one of the first to secure English animals for the Continent, is well known on this side the water.

Hamburg, at once selected as the site for the meeting, is built on a square English mile of ground, with a population of 200,000 inhabitants. The whole of the Hamburg territory does not amount to more than 33 square miles; but it has to keep 72 English miles of river in

a navigable order, surrounded by foreign states, that try to strangle them through toll-bars: and in spite of this they have been able to work themselves up, without marine or military forces or diplomacy. The suburbs and the immediate neighbourhood, round the banks of the Alster, are garnished with the finest villas and gardens, which you may count by hundreds, and scarcely see two houses alike. Englishmen who visit this place use the expression, "This is a paradise." The Alster, an artificial lake, raised eleven feet higher than the Elbe, has a good supply of fresh water from a large extent of country lying to the north-east. It empties itself into the Elbe at the back of the famous English Hotel, from the "summer-house" of which you see the falls of the water.

The show-yard was within an easy distance of the city. On entering, you could not fail to be impressed with the importance of the gathering. A tastefully-arranged lake, with a fountain in the centre adorned with flowers, &c., backed by an ornamental pavilion for the ban., first caught the eye; while in the distance stood the working offices and refreshment rooms, supported around by the exhibition classes and implements. The varied costumes, the many tongues, the several characteristics of the many breeds of stock, coupled with the weather and the novelty of an international gathering in the German States, had its effect upon the visitors. These were numerous and distinguished; but it was singular to remark the absence of the English aristocracy, the leading breeders and, we may even write, nearly everybody else except the officials. The Royal Agricultural Society was represented almost alone by Sir W. Watkin Wynn—the breeders by Mr. Crisp, of Butley Abbey; Mr. Sexton, of Suffolk; and Mr. Woods, as Lord Walsingham's agent. Nevertheless, England was tolerably well represented by her animals.

Proceeding now from the course to the show-ground, we may begin by saying that as it is difficult to follow the classification as arranged by the committee of management, we must make our remarks as general as possible. In primis, the English exhibitors of sheep ran great risk of being without a representative or a judge, for no person was appointed to act in this department. It was, however, preliminary arranged that Mr. Robert Smith, of Emmett's Grange, should officiate, both for the English cattle and sheep. The Merinos stand first in the catalogue, and are classified as rams and ewes with fine wool, and rams and ewes of coarser or different descriptions of wool. It must be understood that in each class of sheep animals of all ages are exhibited, and not as at the English exhibitions, where there are classes for rams of one year old, and others for rams of any age. The entries were as follows—

- 165 Merino rams of fine wool.
 103 Pens of 3 ewes do.
 824 { 193 Rams of coarser wool.
 37 Do. do. in another class.
 94 Do. do. do.
 323 Pens of 3 ewes do. do.
 50 Southdown rams bred in England and Scotland.
 120 Pens of 3 Southdown ewes bred in England and Scotland.
 32 Southdown rams bred on the continent.
 21 Pens of Southdown ewes do do.
 14 Shropshire or other short-woolled rams.
 12 Pens of ewes do. do.
 20 Leicester rams bred in Great Britain or Ireland.
 46 Pens of 3 Leicester ewes bred in Great Britain or Ireland.
 6 Leicester rams bred on the continent.
 21 Pens of 3 Leicester ewes do.
 100 Cotswold or Lincoln rams bred in Great Britain or Ireland.
 177 Pens of 3 Cotswold or Lincoln ewes bred in Great Britain or Ireland.
 10 Long-woolled rams bred on the continent.
 35 Pens of 3 do. ewes do. do.

The exhibition of Merino sheep is undoubtedly the largest ever held, and of this breed there are many excellent specimens. We can almost think we observe an increase of size and an increasing weight of wool: whether this is done by a more careful selection of the animals bred from, or by a distant dash of some other breed, we are unable to say; but we certainly do observe not only this increase in size, in many of the animals, but that unerring test, the hand, tells us of more mutton and of better quality than we generally used to find. We hold that it is a matter for serious consideration with our foreign friends whether they will confine themselves to the production of wool alone, or endeavour to produce a more profitable carcase at the same time. If this be done, we think that the Englishman's laugh at a foreign chop or leg of mutton will pass into oblivion. That the international exhibitions are calculated to remove much prejudice admits of no doubt; as for instance Lord Walsingham's best Southdown ram was sold for 100 guineas to Baron Maginas, of Saxony, and the second prize sheep was immediately afterwards sold at a high price to Baron O. Hedengren for the Swedish Government. Other sales followed in quick succession, and when we left the yard only three of Lord Walsingham's sheep remained unsold. We gathered the following figures:

First prize yearling Southdown ram	100	gs.
Second do. do.	50	gs.
Second do. (at Yarmouth)	60	gs.
No. 18 - - - -	-	40
Shearling - - - -	-	46½
Little sheep - - - -	-	35
Nine shearling ewes - - - -	-	180

The unsold sheep were above an average for one of which 80 guineas was refused. The Merton flock received all the prizes. The Yarmouth first prize shearling again stood A 1 but the second at Yarmouth had to succumb to the third. The ewes fairly staggered the German flock-masters, showing that good and fine wool could be produced on large carcasses. Good specimens of the Babraham flock were exhibited.

Many of the sheep were exhibited in their wool, which at once created an unfair test as to qualities against the shorn ones, and in one instance the judges had considerable difficulty as to naming their reserve number. Several of the sheep exhibited, especially those in the wool, suffered immensely from the heat and fatigue of their journey. Lord Walsingham lost a capital ram worth 70 guineas, Mr. Crisp another ram, and Mr. Taylor his best yearling ram, before being judged—a pure Webb, an brother to the ewes. The Duke of Richmond's ewes, as also others of Messrs. Crisp and Sexton, sold well. Of the Southdowns bred on the Continent, we may mention those exhibited by G. Zoeppritz, Wurtemberg, Baron Nathusius, Baron Magnus, of Drehsa. These were the most successful flocks, and carried away the prizes. They are descended from the Babraham sheep, and were real fair specimens of what may be done; but there was a falling off in others—in fact, some exhibitors had no previous opportunity of knowing what an English Southdown ought to be. This type, however, has been strongly impressed upon them at last by means of the International Meeting, where they have had the true Southdown placed before them, and from which a future trade must spring.

Award of Prizes.

Southdown Rams.—First and second, Lord Walsingham, Merton Hall, Norfolk.

Southdown Ewes.—First and second, Lord Walsingham; third or reserved, Mr. Taylor, Harptree Court, Somerset.

Southdown Rams bred on the Continent.—First G. Zoeppritz, Wurtemberg, bred from Messrs. Webb and Foljam's flocks; second, Baron von Nathusius, Prussia, bred from the Babraham flock; third or reserved, G. Zoeppritz, Wurtemberg.

Southdown Ewes bred on the Continent.—First G. Zoeppritz, Wurtemberg; second, Baron von Nathusius.

The Classes open to all other Shortwoolled Breeds from Great Britain were pretty well contested. First, for rams, was awarded to Mr. Guerrier, London, for his Oxford Down, of capital form and quality; the second went to a very fair specimen of West Country Down, bred by Mr. Humphrey, Oak Ash, Berks. Mr. Druce of Eynsham also exhibited some good specimens in this class; but as they possessed heavy fleeces, upon large frames, the

five foreign judges completely upset Mr. Smith, and would "go in" for animals that possessed more of the Down qualities.

For Shortwoolled Ewes not being South-downs, there were only three entries, but these were sufficient to represent their qualities. Mr. Humphrey's West Country Downs were first; Mr. Merton's Hampshires second; and Baron von Lassert, Mecklenburg-Schwerin, highly commended.

The Leicesters from England and Scotland were pretty good. Mr. Groves, Kirk Hammerton Lodge, Yorkshire, received the first prize, and honourable mention as third, for two good animals; the second went to Mr. Smith, Hull, for a ram bred by Mr. Fisher, Beverley. Lord Kinnaird, Scotland, had also some useful sheep in this class.

Leicester Ewes from Great Britain (7 pens)—Lord Kinnaird, Rossie Priory, Perth, distanced all competitors; they were descended from the old Burley-on-the-Hill flock, and quickly placed by Mr. Smith as A 1: these were fine specimens, and had kept their quality and form well up to the good old age of five and six-shear ewes; the second went to Mr. Smith, Hull. Mr. Grove's ewes from Yorkshire were highly commended.

Leicesters bred on the Continent.—These were but moderate sheep, and by no means recognized by us as approaching the English Leicester; but the money was distributed.

Lincoln Sheep bred in England.—Here we had a tolerable muster from the flocks of Messrs. Marshall, of Branston, Lincoln; Kirkham, as exhibited by B. Henneberg, Holstein; J. Clark, of Long Sutton; and Merton's, of London by purchase "on speck." Amongst these were some splendid specimens of the Lincoln long-woolled breed from Mr. Marshall's flock, who would have had all the prizes but for the marked aversion of the foreign judges to heavy fleeces of wool. However, the English judge insisted upon his shearing receiving first honours, and found a second prize sheep amongst Mr. J. Clarke's. Mr. Marshall's two shear was then placed as third best, and his ram hogs, truly enveloped in fleeces of lustre wool weighing at least 20 lbs. each, were highly commended, and honourable mention made of their respective fleeces. Mr. Marshall also exhibited five fleeces in Department A., for articles of produce. These fleeces were minutely inspected and weighed by the authorities, who recorded them thus: three Lincoln hogg fleeces, very fine, weight 17 lbs. each; two fleeces from two-year-old sheep, very heavy and good, weighing 19 lbs. each. The length of the staple upon the ram hogs shown in the classes was 18 inches, in broad flakes of a bright rich yellow lustre caste.

Cotswolds bred in England.—This breed was well represented by Mr. Sexton, from Suffolk, Mr. Handy and Mr. R. Garn, Gloucestershire,

as also by Messrs. H. Gebhard, London, Mr. E. Merton, London, Mr. Gibson, Scotland, who sent specimens for two purposes—to compete and for sale. Mr. Handy sent a magnificent old sheep, which at once was placed first; but we much doubt the wisdom of sending so fat an animal "over the sea." Mr. Robert Garne had two capital sheep in the yard—these were placed second and third. There was a good trade doing in Cotswolds.

Cotswold Ewes bred in England.—There were some fair specimens from Scotland. The first prize went to Mr. J. Gibson, Woolmer, Edinburgh—these were bred from the flocks of Messrs. Handy and Lane. Mr. Merton's young ewes received the second.

Long woolled Sheep of a Continental race.—These specimens were from the marsh lands of Holstein, and a few from Hanover. The Holstein race is of a large caste standing immensely high, and known for their unrivalled produce in numbers at a birth. As an instance, we give a quotation from the catalogue, as exhibited by N. Dohrn, Damonfeth, Wiltermarsch, Holstein:

1 mit (ewe)	5 lammern (lambs)	weiss (born)	3rd Jahr.
1 ditto	4 ditto	ditto	ditto
3 ditto	3 ditto	ditto	ditto

Thus, we saw eighteen lambs produced, and sucking their five lambs—surely this is worthy the notice of the Acclimatization Society! M. Dohrn purchased two Cotswold rams for crossing this race, with a view to a more meat producing element, and they really seemed in need of it—fancy five lambs to rear up! In the other classes for foreign sheep (not Merinos) we noticed pretty well every form, colour, and class of wool that could be thought of—some had horns. There were amongst them many well-intentioned breeds that might be most profitably improved by an infusion of English blood; but this would require great care, so as to maintain the family characteristic of the Continental breed. To enumerate the prize list would be uninteresting to English taste. There were some interesting *cross bred* classes, resulting in a profitable return. In one instance the Cotswold ram and a Merino Ewe had produced a prodigious animal with fair wool and feeding qualities. A cross between the Southdown and Merino also produced a capital animal, as did the cross between the Leicester and Merino. These were kindly furnished by Baron Nathusius as specimens of the crosses. There are severally designated: Cotswold-merino, and Leicester-Merino. There is also a very good looking sheep termed Dishley-merino; and another named Lincoln-velmoe. These results tend to extend the international element and market for English rams—in fact they were much sought after; so much so that in some instances you would see quite a crowd round the English pens, and many of the crosses.

Average live weight of the three shearing

ewes, as shown in the different classes, weighed for record on the suggestion of Mr. R. Smith:—

	lbs. each.
Lord Walsingham's Prize Southdowns	167
G. Zoeppritz " "	
bred on the Continent	155
Mr. Humphrey's West Country Downs	169
" Smith's, Hull, Leicesters.	164
" Marshall's Lincolns.	260
" Gibson's Cotswolds	192
M. Dohrn's Holstein ewe (with 5 lambs)	200
" " 5 lambs.	84

The above is the new Hamburg weight, 100 lbs. of which is equal to 107 lbs. English.

These live weight returns convey *solid* information which may be readily turned into dead weights. Multiply by 5 and divide by 8, and you have a basis to work upon, which practice will quickly regulate according to the quality of the animal. Thus, a sheep weighing 200lbs. alive, will weigh 125lbs., nett, when dead. This experiment at once exposed the "unfair shorn" sheep, and placed the solid ones in their right position *Scales vs. Tape*.

Cattle.

Shorthorns bred in Great Britain and Ireland.

Amongst the bulls were some first-class specimens, such as First Fruits, Gamester, and Lord Lovell. These certainly left a mark upon the foreign mind, and were constantly surrounded by anxious enquirers—but, to their respective attendants, in an "unknown tongue." We need hardly name that First Fruits and Gamester were each first in their classes, and Lord Lovell second to Gamester. Lord Kinnaird's bull Honeydew—famous for his former laurels in the North—had great merit; indeed, he is a massive and well formed animal, with fair quality. A bull by Royal Butterfly 3rd was second to First Fruits. Amongst the females Mr. Crisp was again foremost, with his first prize cow, second prize heifer, and a commendation. Mr. J. Groves, Kirk Hammerton, exhibited a white heifer of fine proportions, and received the first prize. Amongst the shorthorns bred on the Continent, were two prize bulls and a heifer descended from the Towneley herd. The Ayrshires was by no means good. There were some good types of the Galloway breed, which sold readily, and at high figures. These were chiefly from Forfarshire. Mr. Stewart's heifers from Aberdeen were very choice; but the leading animal was Mr. D. Smith of Leyshade's Ole Bull—a good one. French Charolaise (shorthorn) were not remarkable; in fact, they were scarcely represented. To enumerate all the Continental breeds of cattle, as here classified, would be tedious, and by no means profitable. They were much of the same order as those exhibited at Battersea but not so choice. Some of them had been

crossed with English bulls; these stood out as remarkable specimens, in the midst of their leaner brethren. The most remarkable cross was with a shorthorn cow and a Zebu bull; another cross, pretty similar, was that with a Zebu cow and an Ayrshire bull. Next came the classes for working oxen, the most remarkable feature of the foreign section. They were shown in their harness, which was very picturesque, and they were of immense size, and in many respects represent a cross from the English breeds, especially the Sussex and Devon. This formed a pretty feature of the show.

What may be designated as "the business" part of the meeting, viz, the sale department went off well. In addition to a clearance of all the English Southdown and Cotswold sheep, some few Lincoln and Leicester lots of pigs, and all the Galloway cattle, Lord Walsingham sold his second-prize bull Lord Lovell, and Mr. Crisp was just closing for Gamester. First Fruits was purchased by a company in the neighbourhood of Tonning, to be used by subscription. Several hundred Downs and other ewes were sold by salesmen and dealers. One party invested £2,000 in stock for sale at the show. Four Scott's bred by Mr. T. Lyell, fetched 500 guineas.

The pigs were numerous, and in many respects good. Messrs. Crisp and Sexton did well for Suffolk, in carrying away a "lot of prizes," while they sold their animals at high and remunerating prices. There was a great trade carried on amongst the "swine."

Horses.

The strength of the horse department will be apparent when it is stated that there were no fewer than 513 entries, the greater part of which were present. These were divided into 36 classes, viz, thorough-breeds, Arabs, and half-breeds, bred on the continent; half-breeds bred in Great Britain and Ireland; Suffolks, and other horses for agricultural purposes, bred in Great Britain; agricultural horses bred on the continent; different classes for mares and geldings, for riding, &c., from one to five years old; ponies of different sizes, &c. &c.; indeed, far too numerous to mention in these hurried notes.

The entry for thorough bred stallions included the well known names of Hobbie Noble, Mainstone, Willie Wright, Vortex, Harlestone (by Cotherstone), Kingfisher, &c. &c. Of these "Vortex" took the first prize of 400 thalers, "Harlestone" obtaining second honours and 100 thalers; whilst Hobbie Noble's bent forelegs prevented him from gaining more than a commendation. Next came the class of Arab stallions, containing several very clever animals, the winner, who comes from Mecklenburg, being 29 years old, and one of the most perfect specimens of his race. He gets a prize of 200 thalers. The second Arab was ridden by Lord Raglan in the

Crimea, and looks very different now to the wretched state he was in when he arrived at Mr. Mayor's yard after that campaign.

The first prize of 200 thalers in the class for half-bred riding-horses, bred in Great Britain, was taken by "St. Giles," a trotting horse from Yorkshire, but now the property of Mr. C. Olde, of Hamburg. Mr. Holmes, of Beverley, gets the 2nd prize of 100 thalers for "North Star." The first prize of 100 thalers for the best brood mare for riding purposes is gained by the almost invincible "The Yore," who will not, however, again appear in an English show-yard, Mr. Crisp having been induced, for a *consideration*, to part with her to the Grand Duke of Mecklenburgh. Much as we like to hear of distinguished foreigners buying our live-stock, we can but regret the loss to our country of so perfect an animal. Forty-four stallions bred on the Continent are shown for riding purposes, many of them being thoroughbred and good looking. Forty brood mares for riding purposes are shown, several of them being exhibited, but not for prizes, by the Kings of Hanover and Wertemburg, whilst an equal number in the two classes of three and four-year-old and one and two-year-old fillies are shown; although many of these animals are well bred and good looking, they nevertheless lack the substance we like to see in a class for "riding and hunting purposes." In the class for carriage horses bred in England, Mr. C. Olde takes first and second prizes for stallions; Mr. Groves, and Mr. Smith, of Marton Lodge, Yorkshire, respectively taking the first prize, 100 thalers, and second, 50 thalers: for their brood mares, and Mr. Holmes gets the first prize, 100 thalers, for his four-year-old daughter of Wild Hero. There were large entries of this class bred on the Continent.

We come now to the horses for agricultural purposes. The first class in this section were Suffolks; and it is rather to be wondered at that the honour of representing that breed would have been left almost entirely to Mr. Crisp; but that he was fully equal to the task will be seen from the fact that he took nearly every prize, not only in the Suffolk class, but in the other classes in which it was eligible for a Suffolk to compete. The first prize, 100 thalers, was awarded to Mr. Wilson's three-year-old colt that took the third prize at Ipswich the other day, Mr. Crisp taking the second, 50 thalers, also for a three-year-old. Stallions of other English and Scotch breeders: Mr. Groves (Yorkshire) gets the first prize, 100 thalers, with a very fine horse, "The Brewer;" and a clever three-year-old Clydesdale from the Royal Windsor farm gets the second prize, 50 thalers. "Dusty Miller," from Dumfriesshire, is highly commended, and Mr. Forbes's four-year-old is commended. Mares of the above class; The first (100 thalers) and the second (50 thalers) prizes are taken by two

good specimens of the Clydesdale breed from the Royal Windsor farm. The first, second, and third prizes (of 80, 40, and 30 thalers each), for the best pair of agricultural mares, were all taken by Mr. Crisp, for some useful mares, all three-year-olds. It was, in fact, a "walk over," as there is but one other entry, and that consisted of a pair of light carriage mares. There were several very active French horses and mares, the best being shown by Baron Nathusius, of the Percheron breed. Some good stallions and mares bred on the continent for agricultural purposes, but looking more fit for carriage-work, were shown; also some young geldings and fillies, but these latter classes were thought by the judges much too light for the purposes for which they were entered, and they withheld the prizes, several of them looking more fit for hunting or light harness work. There were some clever ponies, the prizes being taken by foreigners, with the exception of a second prize of 15 thalers gained by Mr. Crisp for a five-year-old mare pony, with foal at foot. The arrangements in the horse department were very good, excellent boxes being provided, with canvas blinds to enclose them entirely at night. There was a horse-ring in which the horses paraded every day, and it was a novel sight to see six or seven pair of carriage horses driven in breaks, &c., round the circle. Of these a handsome pair of dark brown geldings, belonging to Mr. C. Olde, obtained the first prize of 300 thalers; and Mr. Holmes (Beverley) the second prize of 200 thalers. Too much cannot be said in praise of the pains taken by the officials to have the meeting pass off well, and if only one or two of the classes had been more clearly defined we should not have had it in our power to say a word against the arrangements.

While our continental friends are happily exulting in their success, they have yet something to learn. On entering the yard we found the sheep exhibited from Great Britain almost studiously mixed up with the same breeds produced on the Continent; sheep in and out of their wool competing together, and the judges at work with the printed catalogue in their hands! The awards over, and the prize cards up, no one became the wiser, for they were placed at the highest part of the shedding, under the loose canvas which covered the sheds, and printed in small type. What would they have said in England? but this being in Germany, it mattered not to the English, who had not yet read up their German. At the lower end of the yard was the implement department, where we found the well-known stands of Shutleworth and Co., the Howards, Ransomes, Barretts, Burgess and Key, Smith and Ashby, Barrett and Exall, Turner, Bental, &c. There were 5 entries for steam ploughs, which were tried a short distance from the city. Trade was said to be brisk especially in the locomotive department. We saw nothing on the ground that we had not seen before, and therefore reserved

ourselves for the Worcester Royal. The mishaps amongst the steam ploughs, however, were numerous. One missed the boat at Hull; another received a severe "shaking" on the journey; a third toppled over when at work on four-acre lands, and a fourth may probably pull through, and receive the reward of merit!

Summary of entries from Great Britain and Ireland; Horses, 67; cattle, 132; sheep, 400; pigs, 89; implements, 73; produce department, 4—total, 737. Total of entries from all countries: Horses, 524; cattle, 965; sheep, 1,766; pigs, 293—total, 3,548. Implements, 2,941; poultry, 328; produce, 786.—Grand total of all, 7,603.

PLOUGHING AND PLOUGH JUDGES.

The following remarks from an editorial in a recent number of the *Irish Farmer's Gazette* contain much that is highly important and suggestive, and that is as applicable to farmers on this side the Atlantic as on the other. The mechanical methods of cultivating the soil have for several years been undergoing a slow but certain change; and from the recent introduction and improvements of steam ploughs and cultivators the rate of progress will undoubtedly be greatly accelerated. On this continent, we particularly need all the appliances which modern mechanical science can render in effecting a cheaper and more thorough working of the soil.—Eds. C. A.]

We have repeatedly advocated the extension of tillage in this country, by which we mean that system of mixed farming which gives us not only summer food for our stock, but also ample supplies to carry them over winter, and fatten them for the butcher during a part of the year when the latter cannot be done, if we are to depend, as many depend entirely on pastures. The propriety of such a system of management is self-evident, and we feel convinced that its general adoption is merely a question of time.

It must be borne in mind that there are very different kinds of tillage. We have, for example, the rude and imperfect cultivation of the soil which is to be found in so many cases among the poorer class of farmers, where the surface is little more than stirred year after year, and cropped in such a manner that in a short time its productive powers become so enfeebled that the land cannot yield much more than the seed sown, and it is then left to be recruited through the action of natural agencies. Then we have, as a contrast, the beautiful workmanship of the skilled ploughman, with his highly finished modern plough and his powerful team; and, as a still greater contrast, the "smashing" action of the steam cultivator—that great step, for it is as yet but a step, towards the perfection of an art upon which the prosperity of the nation so much depends.

There have been greater changes effected in the form of the plough, and the material of which it is constructed, than perhaps, in any other farm implement. There is wide difference between the highly finished and almost self-working implement of modern Royal shows and the rough-pointed stick with which primitive tillers of the soil stirred the ground: an implement little better in its capabilities than the pig's snout, which Jethro Tull considered the first model of the plough. And even in modern ploughs there has been much done to alter the form, effecting the substitution of a light and really elegant implement for the cumbersome ploughs used by our fathers.

A question, however has arisen, whether in this refinement which the plough has undergone the work it is intended to perform has not, in reality, been in a great measure lost sight of, that work being "the most expeditious and effectual comminution of the soil and its conversion into a seed-bed." The investigation of this point has been very ably handled by "An Old Norfolk Farmer" in the last number of the *Journal of Agriculture*.*

Alluding to the beautiful appearance of the work produced by modern ploughs at competitive trials, and the decisions of judges, he states that the object appears to be, "first to produce a continuously smooth and unbroken furrow-slice, lying at an angle of forty-five degrees; and secondly, to effect this at the smallest expenditure of power." He objects to furrow-slice "without even a crack," quoting in these words the laudatory language of one of the judges at a competitive trial, on the ground that the real object of ploughing—"the speedy preparation of the seed-bed—is sacrificed to the mere appearance of the surface," and asserts that "whilst a well-pulverized soil is admitted to be an essential condition of a proper seed-bed, the preservation of the form of the sod, which presents it in one hard, elongated, smooth, and unbroken furrow-slice, leaves it in a very unfit state for the purpose." Every practical man must assent, we think, to this. It is true that if such a furrow-slice as that which "An Old Norfolk Farmer" describes is allowed to remain for length of time, particularly when exposed to frost, &c., the action of the weather will reduce the hard, unbroken mass of earth into a state better suited for attaining the object contemplated by its inversion; "but what says the writer in the *Journal*—

"What of the clover leys sown with wheat in the autumn upon the up-turned flags, without any other preparation? and ploughed too, upon the new principle laid down by the judges—of "a furrow-slice without a crack in it"—a hard, continuous, square mass of clay, the upward edge well defined, and the surface smooth and perfect as a brick just turned out of the mould; for such, in plain phrase, is the ideal perfection of ploughing, in the

estimation of judges. And this, too, must undergo the operation of rolling before the drill or dibble can deposit the seed; and thus, instead of comminution, to form a seed-bed, the soil is rendered as hard and unfit for that use as the art and implements of the farmer can make it."

This is strong language; but the importance of the matter, and the grave nature of the error which has crept into it—the sacrifice of utility to mere surface beauty—certainly demands that strong language should be used in drawing attention to it. The "Old Norfolk Farmer" blames the judges at competitive trials, especially those of the Royal Agricultural Society of England, and not the implement makers, who are forced "to carry out the absurd ideas of the judges," or run the risk of finding their ploughs condemned.

The writer in the *Journal of Agriculture* considers that light has been thrown on the subject by the efforts of Mr. Smith, of Woolston, who, he believes, has struck into the right path in his "smashing up" system of cultivation; but he considers the Tweed-dale plough "superior to the 'cultivator,'" and believes that "if it can be worked by team, instead of horse-power, will supply every requirement of cultivation." This is precisely the view taken by Mr. Pentland, whose experience of the Tweeddale plough and sub-soil-trench plough we recorded in our columns nearly four years ago (*FARMERS' GAZETTE*, Sept. 3, 1859), and we know that similar opinions are held by others who have introduced the Tweeddale implements on their farms.

The "Old Norfolk Farmer" insists strongly on the importance of "speedy pulverisation, deep culture, and thorough draining," as "the distinguishing marks of good husbandry." Not deep culture on water-logged soils, or thorough draining followed either by scratch work ploughing, or a system which turns up the land in "hard, elongated, smooth, unbroken furrow-slices," but deep culture preceded by thorough draining, and the use of such implements as will break up the soil in the most effectual manner for the admission of those sweetening atmospheric influences which are shut out when those essential marks of good husbandry, deep culture and thorough draining, are neglected. Three years ago the writer of this article read a paper on "Deep Cultivation and its results," at a meeting of the Dublin Chemical Society, (see *FARMER'S GAZETTE*, May 5th, 1860), in which precisely similar views were set forth as those which we find expressed by the "Old Norfolk Farmer." Like him, we have long known and felt the importance of this subject, not only to farmers, but the community, seeing that— to use his words—"On this question of comminution and deep culture, united with thor-

ough draining as the basis, depends the future of agriculture," and for this reason we desire to urge the serious consideration of it on our readers.

LEICESTER SHEEP AND THEIR MANAGEMENT.

At a recent meeting of the Boroughbridge (Yorkshire) Agricultural Society, a member of long experience in sheep management, gave an interesting account of the results of various crosses, and found that the largest and coarsest breeds were not the most profitable. He, and his neighbours, had of late years adopted the improved Leicester with entire satisfaction, and the following is given as a correct description of the best specimen of such an animal, which our Canadian readers will find in some important respect not wholly applicable to sheep which pass for Leicesters here, although we have some really good flocks in different parts of the Province, and which are regarded by their owners as the best and most profitable sheep, on the whole, for our climate and pastures:

"The head should be small but rather long, light complexion with fine muzzle, open nostrils, prominent eyes, placid countenance, short thin ears, hidden in wool, the neck not too long, but broad and well filled with flesh, so much so that the head cannot be raised much above the level of the back, the breast wide and deep, and projecting in front of the fore legs, where it should be met by a heavy neck vein; shoulder-blades inclining towards the crops, and hidden in flesh at the summit; girth behind the shoulders deep, the chine forming a straight horizontal line, should be thickly covered with firm flesh, cloven from shoulder to rump, broad loins, the chine here a little convexed than otherwise. The extremity of the rump should be nearly in a line with the back, the thighs well filled and terminating abruptly a little above the hocks; feet well apart, and knees and hocks slightly inwards. The entire surface of the skin, except the muzzle, face, legs and pits, should be covered with long wool of high lustre, varying as little as possible throughout in length or quality of staple, not terminating in too fine a point."

He then goes on to discuss the merits of these sheep. The following extracts from his remarks, include some useful hints:

"The time of admitting the ram to the ewes should be according to the locality and the climate—the second or third week in October is the usual time with us. Stocking is not only productive of more lambs, but is also

economical, as one ram is then equal to upwards of fifty ewes, thereby saving the expense of hiring or purchasing a second ram where that number of ewes are kept. It is essential that the ewes should be marked as they take the ram, in order that they may be housed and have the attention of the shepherd in succession during the lambing season. It is requisite that the ewes should receive a liberal allowance of nutritive food when some weeks advanced in pregnancy, which tends to develop the fetus, in which case strong and healthy lambs generally follow. When the lambing season arrives, those ewes which have to lamb first should receive close attention. The safest plan is to house them every evening, and to visit them at intervals of half an hour or so. In all cases of difficult parturition, allow plenty of time, some hours after the first symptoms, and never attempt, except in rare instances, to extract a lamb without having first put it into position, which must be done with judgment, caution and patience. In all cases where handling has been resorted to, anoint with black oil or other antiseptic, to prevent gangrene or mortification. Should the ewe exhibit symptoms of debility, give gruel with brandy. In favourable weather docking and castration may be performed about the third day after birth, after which housing is essential for two or three nights, when the animals may be turned away altogether, taking care to apply a little paint to the necks of all twin lambs, which not only serves as a safeguard against foxes, but enables the shepherd to recognise them up to shearing. If not placed in fresh pastures, the ewes with pairs should be allowed artificial food, say a mixture of rape cake, malt-cake, oats, &c., with a little condiment added, all of which increase the yield of milk. I would here urge the indispensability of sheep having access to water. The lambs having acquired a taste for cake, &c., through the medium of the dam's milk, soon begin to nibble it. When they take it more freely, the ewes should be deprived of it, by placing it in water-proof troughs, which can now be had at a moderate price, made of corrugated galvanized iron. These are placed in an enclosure, in the fence of which is inserted a hurdle which will admit the lambs only. In the beginning of June the lambs are weaned and put on the best pasture the farm affords, for at this stage the flock owner finds great difficulty to keep them progressing, and a considerable loss of flesh is the result if not well cared for. Early turnips or rape should be provided and a few old sheep should accompany the lambs, to teach them to eat the turnips more readily. When they eat with avidity, the roots should be cut at once, and continued throughout the season. For this purpose Gardner's cutter is the best.

"If lambs are intended for early maturity, say to come out fat in February or March, it

is advisable to draw out the she-hoggets which are intended for breeding purposes, as forcing when young does not tend to their subsequent well being. Ewes intended to be draughted, should be marked soon after lambing, and the lambs weaned early, so that the ewes may be fatted for market. All sheep during summer should be allowed frequent change of pasturage, especially if laid thick upon the ground. Most farmers in this part of the country, I think, clip much too early, for, unless sheep are intended to be slaughtered immediately, clipping in the generality of seasons, is attended with an enormous sacrifice, more especially in the cases of ewes giving suck. Why should we in this comparatively cold climate shear our flocks, some weeks before south county farmers? The thousands of sheep sacrificed by the folly of early clipping in 1860, ought at once to have convinced us all that by premature shearing there is a chance of losing a great deal without the probability of gain. Dipping as soon after clipping as convenient is commendable, as it destroys the tick and the other filth; and when the flies become troublesome, a frequent sprinkling of water, in which sulphur and spirits of tar have been mixed, tends to ward off the flies, and contributes much to the comfort of the flock. I think, however, a second dipping takes weight out of the fleece, which is not easily restored. I would sooner recommend a light smearing in autumn, but the salve wants mixing and applying with judgment, so as not to injure the fleece in the slightest degree."

WASHING AND SMEARING SHEEP.

MR. EDITOR, SIR:—In your *Agriculturist*, the number for July, I see an article on wool-growing, which I think is well worth the attention of all keepers of sheep.

In the first place, wool is a very beneficial crop, and if proper attention be paid to that production, it will return a per centage worth notice.

In the second place, as there seems to be a difference of opinion at present, as to whether wool should be washed or not, (before taken from the sheep), should the latter prevail, it behoves all wool growers to have their wool in as good a marketable state as possible when shorn, and especially free from what is termed here "matted fleeces." The cause of which is either from sickness, or want of proper care and attention, as stated in the articles above mentioned.

For the last three years I have adopted the old English method of dressing sheep for the ticks, and have used washes and ointment, both with beneficial results; but must give a decided preference to the latter, as you can use it in almost all seasons.

I will therefore, Mr. Editor, give you the receipts, if you can find a corner in your val-

able little work, that may benefit many of its readers,

A wash made from tobacco, well boiled in soap suds, with a little soft soap added, say one pound of tobacco to every twenty sheep, and then put the liquid on with a bottle, so that all the wool is wet. Some have tubs made for that purpose, and immerse them in the fluid; one person taking hold of the head and fore legs, and the other the hind legs, only allowing the head to be out of the liquid.

The other wash is made from arsenic: say ten ounces of arsenic for every twenty sheep, and boiled in soap suds as in the above; as this is a strong poison, great care should be taken to cleanse every vessel used in the preparation.

In the mixing of water in either of the above, you may calculate two quarts of the mixture for every sheep.

The ointment is made from quicksilver and hog's lard. There is a difficulty in the mixing, as it requires a length of time to incorporate it properly, but any apothecary could give the necessary directions.

Therefore suppose I have twenty sheep to dress, take five and a half ounces of quicksilver to twenty six and a half ounces of hog's lard, which will make two pounds of ointment, sufficient for that number.

This dressing only requires doing once a year, about October is a good time, and the whole of the flock should be done, whether it is intended for fattening or breeding purposes, as no catle can thrive well if infested by vermin.

The ointment is put on by shedding the wool, a row on each side of the back bone, and other two rows parallel on each side, the ointment applied to the skin with the tip of the fore finger of the right hand, having the ointment affixed to the rest of your left hand, in some little tin, or the toe of an old boot will do very well, fixed by a strap.

One and a half ounce is sufficient for one sheep; and when once a man gets into the way of doing it right it is an easy task to do fifty a day: and I feel confident that if I can prevail on any one to try it once, I should have no need to urge a repetition the next year.

There is an old adage attached to this ointment in England; it is said, by using this you may buy a horse, and by employing washes a saddle. Therefore they are both good in their places, as certainly a saddle is better than no saddle at all.

I have made this known to many, some of whom may scan these pages, and testify to the results, and perhaps awaken their minds. "To do unto others as you would they should do unto you."

Yours, &c.,

Oakville, July 29, 1863. A SUBSCRIBER.

REMARKS.

We are much obliged to our correspondent for his useful communication, and shall be happy

to receive from him a statement of the profits arising from ten ewes, to which he alludes in a private postscript. Sheep require in addition to correct breeding, enlightened and systematic attention to their management. Washing them where practicable, and the employment of salves no doubt tend to improve the health of the animal as well as the fleece. In some of the more arid parts of Australia, in dry seasons, sheep are shorn without washing; a circumstance arising from necessity rather than choice. In this country water can generally be found for the purpose without much inconvenience.

In the application of arsenic great care should be observed that the skin is not broken, and that the animals do not lick the parts so treated.

—Evs.]

EXHIBITIONS TO TAKE PLACE THIS AUTUMN.

Provincial and State:

Upper Canada, at Kingston, September 21 to 25.

Lower Canada, at Montreal, September 15 to 18.

New York, at Utica, September 15 to 18.

Ohio, at Cleveland, September 15 to 18.

Iowa, at Dubuque, September 15 to 18.

Vermont, at Rutland, September 5 to 11.

Michigan, at Kalamazoo, September 23 to 26.

Indiana, at Indianapolis, September 28 to October 3.

Illinois, at Decatur, September 28 to Oct. 3.

Kentucky, at Louisville, September 15 to 20.

County and Township.

Esamasa, at the Centre Inn, October 2.

Ein, at Erin Village, October 14.

Puslinch, at Aberboy's, October 6.

Co. Peel, at Brampton, Sept. 15 and 16.

Southwold and Dunwich, at Iona, October 1.

West Elgin, at Wallacetown, October 15.

Co. Lincoln, at Grimsby, October 9.

North Leeds and Grenville, Frankville, October 7.

Vespra Tp., at W. H. Partridge's Farm, October 8.

Renfrew Co., at Renfrew Village, October 7.

McNab Tp., at Arnprior, Sept. 23.

Horton Tp., at Town Hall, Sept. 25.

Admaston, at Town Hall, Sept. 29.

Westmeath, at Beachburg, October 8.

Renfrew Co., Ploughing Match, at Bonchere Point, October 14.

McNab Tp., Ploughing Match, Sept. 30.

North Simcoe, Barrie, September 16.

Oro Tp., at Shanty Bay, Sept. 30.

South Wellington and Guelph Tp., at Guelph, October 8.

East York, at

Oct. 7.

Fullarton, Logan, and Hibbert, at Mitchell, September 30.

Toronto and West Riding York, at Toronto, October 6, 7 and 8.

South Lanark, at Perth, Sept. 17 and 18.

Durham West, at Newcastle, October 8 and 9.

North Lanark, at Almonte, September 15.

Wentworth and Hamilton, at Hamilton, October 14 and 15.

Brockville Elec. Div., Brockville, Sept. 16 & 17.

The Poultry Yard.

THE COCHIN-CHINA FOWL.

Of all the breeds of fowls, none has ever created so great an excitement as the Cochin-China. In the year 1816, the first pair that was brought into this country from Shanghae were presented to the Queen, who exhibited them at the Dublin Poultry Show. Immediately the "Cochin" *furor* commenced. As soon as it was discovered, despite the most strenuous efforts to keep the secret, that a certain dealer was possessed of a pair of these birds straight-way the avenues to the dealer's shop were blocked by broughams, chariots, and cabs until the shy poulterer was tempted by a sufficiently high sum to part with his treasures.

Bank notes were exchanged for Cochin chicks, and Cochin eggs were in as great demand as though they had been laid by the fabled goose. Philosophers, poets, merchants, had alike been seized by the mania, and although the latter could hardly come to the price of a real "Cochin," there were plenty of vagabond dealers about with counterfeit birds of all kinds, which were advertised to be the genuine article. For to such a pitch did the excitement rise, that they who never kept a fowl in their lives, and would hardly know a bantam from a dorking, puzzled their brains as to the proper place to keep them, and the proper diet to feed them on. The Cochin is a very hardy bird, and a capital layer, giving us eggs when they are most expensive—and indeed, with regard to new-laid eggs, when they are almost impossible to be got at all. The chickens of such healthy fowls are, of course, easy to rear. A good Cochin should be compact, and large and square built, with a full chest and broad hind quarters. An authority says:—In buying them, avoid long tails, clean legs, fifth toes, and double combs, and, above all, take care that the cock has not, nor never has had, *sickle* feathers. The colours of Cochins are buff, lemon, cinnamon, grouse, partridge, white and black.

I quite agree with Bailey in stating that the cocks should have upright combs, with well-defined serrations; legs feathered to the toes; body slanting from the head to the middle, thence rising to the tail; fluffy thighs and hinder parts; bright eye: long wattle; and deaf-ear; *very little tail*; size and weight very desirable.

Hens—Sharp, intelligent head; small comb, perfectly straight and upright, with numerous well-defined serrations; legs feathered to the toes; great fluff behind and on the thighs; short legs; rise from the middle of the back to the tip of the tail, which should end in a blunt round point; short neck; size and weight very desirable.

The colour of the buff or lemon is:—Cock—pale buff breast; golden hackle and saddle; light chestnut tail, if possible. Hens—buff or lemon throughout, but a few black feathers in necklace not very important; yellow legs essential to both.—*Scottish Farmer*.

POULTRY IN FROSTY WEATHER.

There is something exhilarating in frost.—When the early morning breaks on the earth covered with rime, and the hard ground seems to spurn the foot that treads on it, and the sun rises like a disc of burning copper, there is something cheerful about it. Nature has donned her masquerade dress of white. Your horse cannot contain himself; and the steady old friend for some months past, content to shake his head or whisk his tail, as the only answer to what a grand-daughter of our's calls a "good cut o' the whip," now seeks to devour space, and to try conclusions with your strength or that of your reins. In like manner your tried friend, the old dog, gambols, and, in the gleesomeness of his feelings, he picks up a shred of cloth in the field, and shakes and tosses it for very wantonness. The appearance of real winter is then a holiday for many, but (ah! those *buts*) not to all. It is none to the poultry. Water is frozen; the ground is so hard they cannot scratch; there is not an animal of any kind on its surface; and they must depend on their owner for everything they want. See they lack nothing. First, they must have water.—Few people have any idea of the suffering caused to birds by the lack of water. Their power of maintaining life on the smallest possible quantity of food is wonderful, provided they have water; but a practised eye can tell in a dead fowl or pigeon whether it suffered or not from thirst. The skin becomes hard, dry, and red; the flesh contracts, as it were, and becomes brown, and the whole body looks as if it had been suddenly shrivelled or dried up. You must bear in mind they require more food and better than they do in milder weather; and, if you can, let them have a greater variety. They want substitutes for the worms and insects.—Now, the scraps of meat and fat from the table should go to the fowls. Save the drainings of all the glasses, pour them together, and sweep all the crumbs, and odd corners of bread into it. Feed the birds often, and, if there is snow, sweep a place clean, and feed there. Never feed any kind of bird in such a manner that they shall pick up snow with their food; it is a

strong medicine to them. The lark that fatens in two days on the white hoar-frost becomes a wretched skeleton after two days' snow.—*Cottage Gardener*.

HEN LICE, AND GAPES IN CHICKENS.

I believe I have at last made a discovery, that is very important to the poultry interest of the country, a fact that I wish all poultry raisers to know, I therefore send it to your widely circulated paper for publication. I set it down for granted some years since, that if hatching hens could be kept from what is called hen-lice, or midges, the chicks would not take the gapes or pips, and to prevent that, I have found by frequent experiments that to kill the lice of the hens as soon as they come off with their young broods, is a sure preventive to gapes in their chickens.

My mode, or that of my better half, is to take the hens as soon as they come off with their young, and with common lard or any old grease, saturate them well under their wings and along their sides, and slightly upon their backs, which will kill all the vermin on them, and also off the chicks. Care should be taken not to put on too much, as it will lay the down on the chicks, or mat it so that they are liable to perish in the cool of the morning.

My theory of the cause of the gapes is this, that the vermin from of the old hens get on the chickens and crawl into their nostrils and are thence transformed into the gape worm that is afterward found in the windpipe of the chicken and produces the gapes. In this opinion I may be mistaken, but one thing is sure, viz.: keep the vermin off the chickens and they will never get the gapes. The same remedy we have tried with our turkeys, with entire success.—*Ohio Farmer*.

THE BLACK SPANISH FOWL.

A writer in the *Scottish Farmer*, in giving descriptions of the different varieties of poultry, says:

The real Spanish fowl is recognised by its uniformly black color, burnished with tints of green; its peculiar white face, and the large development of its comb and wattle. The hens are excellent layers, and their eggs are of a very large size. They are, however, bad nurses; consequently their eggs should be placed under other hens to be hatched. The Dorking is the most suitable for this purpose, the hens of this species remaining longer with their chicks than any other. "In purchasing Spanish fowls," says an authority, "blue legs, the entire absence of white or colored feathers in the plumage, and a large white face, with a very large, high comb, which will be erect in the cock, though pendent in the hen, should be insisted on." The flesh of

the fowl is esteemed; but from the smallness of its body when compared with that of the Dorking, it is not on an equality with it for the table. Otherwise, however, they are profitable birds, and their handsome carriage, and striking contrast of color in the comb, face and plumage, are a high recommendation to them. For a town fowl they are, perhaps, better than any other variety, their color agreeing well with a smoky atmosphere, and they bear confinement well.

I quite agree with Mr. Baily, of London, in stating that the cock should be—comb large, erect, single; perfectly white face from the comb to the gill. Long pendent white ear lobe, quite free from any mixture of red; ample tail; erect carriage; leaden blue legs.

Hens—very large pendent comb, hanging over one side of the face: face perfectly white everywhere; full breast; body tapering to the tail, which should be ample and carried erect; rather long than short legs; leaden blue legs; upright carriage.

The Apiary.

BEES AND BEE CULTURE.

The following is an extract, slightly modified from a letter prepared for my friend Langstroth. I copy it for the readers of the *Prairie Farmer*, as it may be of some interest to them:

Increase of Swarms.—We have had no swarms to speak of in this country, this season. My friend Marion of this village, who has three hundred colonies, has had but *one natural swarm*. He has lately divided about twenty old colonies. Full one-half the *natural swarms* issuing this season, go to the woods.

Honey—Honey-Dew.—Thus far, this has been the best season for honey that has come under my observation; we have had a large supply daily of *honey dew*, since about the first of June—scarcely a drop of rain has fallen since that date; the drouth is said to be unprecedented.—We are now having a fine shower—this will put an end to the supply, for several days at least. I never saw honey-dew till this season; the oaks and hickories have given a very large supply.—There must be at least a hundred acres of the oak in range of my bees. The largest supply of honey-dew, however, was upon the hickory. I have seen sufficient honey dew on the leaves of a small hickory to keep a strong colony employed a whole day in gathering it. The honey was principally upon the upper surface of the leaves. I have often seen single drops of the dew that would fill one or two bees. There is likewise a large amount of hickory in this section. Other trees have also given a good supply of this important article.

The winter wheat in this section has rusted quite badly. I am informed that it has been

covered with *honey-dew*, and that the *cause* of rust has been assigned to it.

For some days my bees have worked but little—only mornings when there was a supply of the ordinary dew. We have seen so much dry weather that the honey-dew has dried on the leaves. The bees can gather it, however, while the leaves are moist with the other dew.

The honey gathered from the sources described, has a very pleasant flavor. It is very thick. The colonies of bees in this section, and other localities where I have been, are nearly full of honey—no brood scarcely.

The Cause of Honey-Dew.—The cause of honey-dew is still a mystery to me. I am inclined, however, to the belief that it is produced by the aphides. They are very numerous, and where they are most numerous, there is the largest supply of honey. I have observed no honey on trees where there were no aphides.—But the honey may be found under the trees—on the grass, sticks, and stones. It is thought by some that the aphides discharge the honey while flying. If this were so it would seem that we ought to find this dew on the leaves of certain trees and bushes, in close proximity. By close observation, I find that certain trees, within a few feet of these, having a supply of honey-dew, have none of it upon them. I would call your attention to an article on the causes of honey-dew, given on the 29th page of the *American Bee Journal*. At present, I cannot fully endorse the writer's views.

Bass-wood—White Clover.—The bass-wood season is over. This tree did not blossom as full as usual this season. We usually have sufficient bass-wood blossoms to keep our bees busy about ten days. We have had a fine crop of white clover. The drouth put an end to the supply about the 4th of this month—July. The season being dry, it secreted an immense supply of honey. A large percentage of the crop has failed to mature, in consequence of the drouth. As we are having a fine shower, the probability is we shall have an excellent second crop.

M. M. BALDRIDGE.

Kane Co., Ill., July 1853.

—*Prairie Farmer.*

ITALIAN BEES.

Bee culture is beginning to receive more attention in Canada than formerly, and we have seen this summer two or three instances in which it is conducted on a rather extensive scale, and certainly with distinguished success. The Italian species, which has of late received much attention and commendation in the neighboring States, is as yet but little known in this Province. The subjoined article from our excellent cotemporary, *The Country Gentleman*, will be found to contain

much that is interesting and of practical value in relation to the habits and management of these busy and useful little creatures:—

Having had more than three years' experience with these bees, I send you some important facts respecting them, which have fallen under my own observation, and which I believe have not yet been given to the public.

1. The queens are not only more prolific (as previous writers have remarked,) than those of the common kind, but are much more disposed to keep their brood *completely* in the combs. An Italian Colony will often have in two or three combs, as large a surface of brood as the black queens will ordinarily have in four or five. This habit of *squaring* out their work, is more particularly noticeable in the early part of the season, and its importance will be readily appreciated by every bee-keeper.

2. *The Italian bees, when forage is abundant, are far less disposed to rob than the black bees.*

As this fact is not only highly important but directly contrary to the common opinion, the evidence of it will be given somewhat in detail.

Having purchased, last summer, a number of stocks of black bees, in moveable comb hives, I examined them when the fruit trees were in blossom, in order to learn the condition of each colony. After a few hours spent in this work, the bees would follow in great numbers whenever they saw me approach a hive to open it. I was very much surprised to notice that nearly all the robbers were black bees. I cannot be mistaken as to this fact, as both myself and my son spent some hours, for several days, in examining those hives. Some drone-combs, having honey in them, were exposed to the bees, so that when emptied, they might be used for breeding Italian drones, and these combs were soon covered with black bees, very few Italians alighting upon them, although I had a large number of strong Italian colonies. This year, having only a few black bees, and more than eighty Italian colonies on my own premises, nearly all the bees that attempt to rob hives when they are opened, or to alight upon combs containing honey are of the black kind.

I have pointed out these facts to many who have visited my apiary, and the general opinion is, that when forage is abundant, Italian bees are so eager to gather honey from the blossoms, that they have very little inclination to secure it from other sources. It would be difficult to over-estimate the importance of this peculiarity in an apiary where moveable comb hives are used, and where artificial swarming, and other manipulations which require the hives to be opened, are practised.

It is true that when forage is scarce, the

Italian bees are as much disposed to rob as the black, if not more so; but the assertion that they cannot be kept near stocks of black bees, without robbing them of their stores, is erroneous. Mr. Quimby, who has had excellent opportunities for testing this point, has said enough to convince any unprejudiced bee-keeper that they may be safely kept in close proximity to common bees, and my own experience perfectly agrees with his.

3. *The Italian bees will work upon the second crop of red clover.*

Three years ago I had 12 swarms of black bees early in June, to three of which I gave Italian queens. The hives were tolerably well filled with combs by the black bees, but before the young Italians began to gather stores, the honey harvest was nearly over. In August the state of my health prevented me from making any observations, but a member of my family noticed that while the three colonies with Italian queens were working vigorously, the other nine were doing very little. In September I found that the Italians had their winter's supply, while the best of the others had only a few pounds of honey, the season proving one of the worst that I ever knew. The black colonies were broken up, and the bees added to other stocks, while the Italians wintered in good condition. I am now satisfied that the Italians obtained their August stores from the second crop of red clover. Last August I noticed the Italians working vigorously on the red clover, and saw very few black bees upon it. Mr. E. W. Taylor, of Hulmeville, Bucks Co., Pa., who has been so successful in rearing these bees, wrote me last summer, that his bees were filling boxes and frames with honey gathered from red clover, while the black bees in his vicinity were doing nothing. Other persons have written to me to the same effect,

In regions where buckwheat is not much cultivated, and where fall forage is scarce, this peculiarity of the Italian bees will in some seasons make the difference between a handsome profit and a severe loss in bee-keeping.

While it is true that some foreign writers have asserted that these bees will work upon the red clover, I have not met with any statement that they scarcely notice the *first* crop, but confine their operations almost wholly to the *second* crop, or seed clover, which blossoms when the white clover has passed out of bloom, or yields little, if any honey.

I will state, as a matter of interest to bee-keepers, that the three Italian colonies before mentioned produced me the second season 350 pounds of honey, and one large swarm.

L. L. LANGSTROTH.

Oxford, Butler Co., O., May 29, 1863.

Horticulture.

TORONTO GARDENERS' IMPROVEMENT SOCIETY.

The regular Monthly Meeting of this Society took place on the 17th ult.

Present—Messrs. J. Fleming, S. Ashby, E. Townsend, C. W. Lawton, G. Vair, G. Tattle, S. Turner, C. Young, G. Leslie, A. Pontig, B. Love, H. Defries, and J. Forsyth.

Mr. S. Ashby in the Chair.

Mr. Fleming exhibited cut flowers of an excellent variety of Gladioli, a very showy plant at this season of the year, likewise some Fuchsias and Asters which were very fine, also a Verbena that he imported last season, named Foxhunter, which promises to eclipse any of the varieties yet out, a distinct scarlet of strong habit and a free bloomer, in short all the properties of a first-class verbena.

Mr. J. Turner also exhibited a few very fine flowers, amongst others an excellent collection of Liliputian Dahlias, which he seems to excel in growing to perfection.

The subjects discussed were the culture of Orchard-House Fruits, and the successful growing of the Dahlia. On the former subject Mr. G. Vair read the subjoining paper, and was followed by others in an equally instructive style, eliciting many practical and useful suggestions.

On the culture of the Dahlia, Mr. Turner gave an outline of his mode of treatment for the season. In raising his young stock—if roots were plentiful—he would prefer plants obtained from dividing the roots to struck cuttings, as he thought they would be found to grow stronger and bloom earlier and freer than from cuttings. The time of planting out would be from the middle of May to the first of June, much would depend upon the season and forward state of the plants.

The soil best suited to the Dahlia he believed to be a moderately rich sandy loam not too retentive of moisture, the situation partially shaded from the mid day sun and sheltered if possible from high winds.

When the tops are destroyed by the early frosts in the autumn he would cut them down, not too close to the roots, which may be allowed to remain and ripen well in the ground as long as the weather will permit, choosing a fine day before severe weather comes on to take them up, allowing them to dry in the sun, and then stow them away for the winter. An open shelf under the stage of a greenhouse, or a dry airy cellar where the frost can be kept out will suit the purpose well. After some farther remarks by other members of the society the meeting adjourned.

J. FORSYTH, Sec.

ORCHARD-HOUSE FRUIT CULTURE.

By Mr. G. Vair.

The cultivation of fruit trees in pots and tubs has engaged the attention of many, and that more particularly in the last six or seven years, and it now has been proved without a doubt that in Canada fine peaches, apricots, nectarines and pears may be grown by the above system without any great amount of practical or scientific skill. For the successful carrying out of this very important system of fruit culture the public are indebted chiefly, if not entirely to Mr. Thomas Rivers, Nurseryman, Sawbridge-worth, England. That the system has many advantages cannot be denied, enabling the grower to have fine fruit at a very early season of the year, by the application of artificial heat or even without it. In this rigorous climate of Canada, (I speak more especially of the vicinity of Toronto), the cultivation of the peach has defied the most careful and experienced, and I have no hesitation in saying, that the above system is just the thing that was wanted. This is evinced by the many structures that have been erected within the last five years in the City of Toronto, and other places throughout Canada and the States. I regret that this important subject has fallen on me to speak upon, as I would have gladly listened to some one or other of the many competent persons composing the society. I will preface my remarks by briefly stating my small experience in the matter.

As to the best kind of House for the purpose; they may be of any size, according to the mind or will of the owner. I would recommend that the building stand north and south and span roofed, thereby admitting light and air on all sides.

With regard to the kind of trees to be grown I would recommend that where the houses appropriated for that purpose are large, a portion of the trees be grafted on their own roots, placing them in tubs and plunging up to the rim. The sort I mean to be so treated are peaches and nectarines, thereby making pretty large trees that will bear a considerable quantity of fruit. Of course they will not come into bearing so soon as those that are grafted upon the plum, of which three parts of the whole ought to be, they fruit early, grow dwarf and bushy, and will not take up a great deal of space. Nurserymen using the plum ought to be very careful in choosing none but the most healthy and vigorous. If not healthy they will not be found to do, so well as the stock does not grow so fast as the head. I think it commendable for parties that grow largely that they ought to have some young stock on hand, thereby replacing any sickly or exhausted tree which ought not to be permitted to remain in the house at all.

I will now make a few remarks on the system of potting, soil, watering, ripening of the core, &c. I do not think it necessary to have them in large pots. The best peaches I had last year

were grown in nine and ten inch pots, and the of excellent size and flavour. They may be shifted into a large size if you want large plants. But the purpose I take to be not to have the trees larger than can be placed on the dining room table without inconvenience. The soil use is a good turf loam, rather approaching to clay and sand, a few crushed bones, charcoals and a little well rotted heated manure. This pack in around the plant very firmly with a dul pointed stick; this I think a good plan. Previous to starting the trees in spring, I procure a box or large tub, taking some sheep dung, and old hot-bed or cow dung, and mix all up together with soft rain water, I then immerse the pot or tub in this mixture, leaving them until thoroughly soaked through, then put them in the place to grow, again mulching the pot with some well-rotted manure to keep the sun from penetrating too far—the tree being now leafless. This will keep the soil moist for some time, the less water they get the better until they start, as it only tends to exhaust and wash out the mixture given previously. The thermometer may stand about forty to forty five at night for some time, and as they begin to swell that may rise to fifty or fifty-five. They ought to be mulched frequently during the growing season, but this should be discontinued entirely when the fruit approaches maturity, as it will only tend to vitiate the flavour. They ought to be pinched back two or three times during the season to make them bushy, and likewise concentrate the fruit buds for the next year.

When the fruit is pinched the trees may be placed outside under the influence of the sun and air when they will be found to mature much quicker—I mean the ripening of the wood. Syringing ought not to be neglected for a single night during the growing season, except when in blossom, as they are almost sure to get red spider, and if these once get numerous they are difficult to overcome. The peach is subject to the borer in the house, as well as in the garden or orchard. I examine frequently at the base of the stem, and if the borer is found I clean and pare out the wound with a sharp pointed instrument and stop with grafted wax. The most commendable fruits for orchard house culture are, first the peach, second the apricot, third the nectarine. Pears I do not think are worth troubling with, except it be a few early sorts. Cherries are not adapted for the orchard house, as they seldom set well indoors in this locality. The following sorts I have found to do well.

1. PEACHES: *Coolridge Favourite, Early York, Crawford, Large York, Morris White, Noblesse Barenton, Royal George, Kensington, Mixen Freestone.*
2. NECTARINES: *Stanwick, Downton.*
3. APRICOTS: *Moorpark, Early Golden Red Masculine.*

FRUIT ON GRAFTS.

MR. EDITOR.—Will a graft in all cases bear the same fruit as the tree from which it was taken? I suppose your readers will answer in the affirmative, I would once have done so, but cannot now. In the spring of 1859, I took grafts from a Doyenne d'Ete, and inserted two in a Jargonelle I had grafted in a seedling pear some few years before. I grafted it about a foot above the first graft, both grafts grew and the following spring I removed one of them. The one left grew rapidly, and last year it bore about a dozen pears, but not Doyenne d'Ete, which is an early summer pear, but the pears on the graft were hard in October and I do not know that they ever became mellow. The fruit is the same this year as the last; you will receive a sample with this communication. I should be pleased if you, Mr Editor, or any of your readers, can give a satisfactory reason for such a freak of nature.

Respectfully yours,

L. FAIRBANKS.

Whitby, 24th August 1863.

[The specimen of fruit sent with the above communication is small and green and very hard. We are of opinion that our respected correspondent must have made some mistake in selecting the scion from the Doyenne d'Ete pear tree. Probably a shoot of the seedling stock that the Doyenne was grafted on may have grown up with the grafted scion, and may have continued to grow unobserved for years; and we should infer that the graft must have been selected from a branch of the original stock under the impression that it was the Doyenne. The specimens of fruit received are doubtless the produce of the common pear stock, raised from the seed. It would be quite incredible that a scion taken from a bearing tree of the Doyenne Pear and grafted on another pear tree of any sort would produce such worthless gitty fruit as these specimens.—Eds.]

DEATH TO FUNGUS

It is so long since I had occasion to communicate with you that I fear you will almost have forgotten me. I have made, however, a little discovery which I think may be of some use to horticulturists, and it is this which induces me to trouble you again. Some three years ago I was consulted by a large brewing firm about the mould which in warm weather attacks the inside surfaces of their beer barrels. When the empty barrels are returned they are washed, steamed, and dried by hot

air. If kept for two or three days before they are again filled with beer, they become partially coated on the inside with a minute fungus, and it was found that the beer put into such barrels speedily became sour. The idea occurred to me that this fungus was the cause of the mischief, and that it acted on the saccharine matter of the beer much in the same manner as the "vinegar plant" acts on a solution of sugar—that is, it converts the sugar into acetic acid. I proved this to be the case by a carefully conducted series of experiments. The question then arose—how can the growth of this fungus be prevented? I tried many chemicals, and several answered perfectly, but unfortunately those which succeeded best were poisonous, and could not be used practically. At last, remembering that sulphur had been found to be the most useful remedy for the odium, and knowing that its action must be due to very slow oxidation, and consequent evolution of traces of sulphurous acid, the thought occurred to try the effect of a solution of bisulphite of lime. I tried this on a number of beer casks after they had been washed, and no trace of fungus appeared. Beer put into these casks kept sound from six to seven times as long as that which was put into casks which were coated with fungus. The firm alluded to now use it in all their casks, and the beer is found to keep sound very much longer. Starch makers are very much pestered in summer with fungi. I recommended the use of bisulphate to the largest starch manufacturer in London, and he has found it a most effectual remedy. Last summer I advised many of my country friends to give it a trial as a remedy for vine disease, and they have found it to be most efficacious. One friend living in Essex, and having several greenhouses, tried it on four vines which for several years had been much infested with oidium, and never produced any eatable fruit. Last autumn he washed the stems with the bisulphite, and again this spring. He likewise washed the walls with it, and now keeps two or three saucers full constantly exposed in the greenhouse. It gives off a small quantity of sulphurous acid, and effectually keeps down the green vegetation which is so often seen on the walls of greenhouses. He tells me the vines thus treated are the most healthy he has, and have a splendid show of blossom. His report, indeed, is so favourable, that I am induced to hope that a remedy for vine disease has at last been discovered, and that you will be pleased to give it a trial. I shall be very happy to send you a few gallons, should you, from the above statements, think it likely to be of value. I am having trials made on potatoes.—*Hy. Medlock, Chemical Laboratory, 20 Great Marlborough Street, W.—Gardener's Chronicle.*

Miscellaneous.

TO MAKE POTATO STARCH.—Starch made from the common potato, furnishes an excellent substitute for arrowroot as a wholesome, nutritious food for infants. It also makes a good, cheap pudding for the table if cooked like sago; and as it has not the medical properties of the arrowroot, it is much to be preferred as an article of daily food, except for children who are subject to diarrhoea or summer complaint. The process of making the starch is simple, and the time required so short as to put into the power of every one having the means at hand. Wash any quantity of potatoes perfectly clean, and grate them into a tub half full of clean cold water; stir it up well; let it settle, and then pour off the foul water; put the grated potatoes into a fine wire or coarse hair sieve; plunge it into another tub full of clean, cold water and wash the starch through the meshes of the sieve and throw the residue away; or wash it again if any starch remains in the pomace; let it settle again, and repeat this process until the water comes of clear; scrape from the top any remains of the pomace; then take the starch out, put it in on dishes to dry in a warm room, and it will be fit for use immediately. When wanted for use, mix as much as may be needed in cold water, and stir it into boiling milk, or water if preferred, and it requires no further cooking. It also makes a stiff and beautiful starch for clearing thin muslins and laces

DESOLATION IN MISSISSIPPI.—A correspondent of a western paper writes from Young's Point as follows;

The whole country from Milliken's Bend to Hard Pines, opposite Grand Gulf, a distance of sixty miles, is one "abomination of desolation." It has been an earthly paradise. Lordly palaces filled with pictures, statues and articles of *virtu*. Beautiful gardens teeming with floral beauties, are now all laid waste.

In those magnificent halls, where southern beauty and chivalry were wont to revel and drink deep of the red wine of pleasure, soldiers cook their despised "sow belly" with fires built of rosewood chairs and curiously carved furniture, sleep on cotton beds worth fifty dollars each—*i. e.* at any "Lowell mill"—and in the morning abandon all to the horde of filthy hungry negroes who follow the army and gather its refuse, like troops of unclean birds which smell the carcass from afar.

Among these rich nabobs none excelled the Hon. John Perkins. His dwelling is magnificent, even in its ruins, and his gardens are still fragrant with acres of roses. When General Butler entered New Orleans, he chartered the *Magnolia*, one of the largest boats on the river, put his most valuable slaves, pictures, plate, cattle, &c, on board, and set fire to the rest. For seven miles his lands blazed with 5,000 bales of

burning cotton and granaries of corn. His house with its furniture, which cost \$200,000 in Paris, and the houses of his overseers, all were fired, while he stood on the bank and watched the mighty conflagration. In the morning he embarked, a ruined man.

I had never dreamed of such Arabian magnificence as I find in the ruins of these rich planters. In one garden I found no less than seven hundred different varieties of roses. This, I believe is the largest collection in America. There are not more than three in Europe that equal it. The fragrance of these beautiful flowers overpowers the noisome vapours of swamps and bayous.

THE YEW TREE IN THE CHURCHYARD.—Wotton, the editor of *Welsh Laws*, adds a note to this passage to explain that "the yew tree of a saint" is one dedicated to a saint, as *Dubritio* for example, or *Tcilo*, such as are frequently found in the churchyards of Wales. The fact that it is the native British church that we find these sainted trees carries us back for the origin of our churchyard yews to a time more ancient than the conversion of the Saxons. Many of the existing trees appear, from a comparison with those of known date, to be as old as the Saxon times. From the great number of them which still remain it seems probable that they were generally, if not always, planted in our old churchyards as a necessary part of their furniture. Sometimes we find a group of them which might have sheltered a congregation from sun or rain. Sometimes there are four, one at each corner of the churchyard, as if they had been intended to mark out the area of the churchyard. But much more commonly there is only one, and that is usually on the south side of the church, near the usual site of the churchyard cross. What were they so generally, if not universally, planted for? A good deal of learned research and ingenious conjecture has been bestowed upon the question, but without eliciting any very satisfactory conclusion as to their original use or intention.—*The Churchman's Family Magazine*.

THE FOOD OF THE RUSSIAN PEASANTS.—

Practice and native shrewdness had long ago taught the Russian peasant the importance of large quantities of soft carbon being taken into his animal system; important against the cold of that climate, and still more important as a corrective of the large quantity of plain bread he delights to consume; three pounds a day generally, and five pounds during harvest, over and above his *kasha*, or boiled millet, eggs, milk, salted cucumber, mushrooms, cabbage and not unfrequently supplies of beef. The sort of bread he prefers is rye, and prefers it for the same reason that the acute Scottish ploughman clings to his oaten cake, and discerned long before the days of Liebig that it was chemically more strengthening to muscular fibre than expensive wheaten flour. So her

having his dear "black" bread, as well as most other articles of his food, fried up in abundance of rich linseed oil or on high days and holidays with sunflower oil, the hardy denizen of the woods of Archangel, or the roamer over the steppes of Tambov, is able to prosecute his work through all seasons of the year in spite of even Siberian weather.—*Professor Smyth's "Three Cities of Russia."*

PRICES OF NEW DAHLIAS.—The following high prices have been given by members of the nursery trade to amateurs who were so fortunate as to raise new varieties of merit;—Beauty of Telfont was the first that commanded a high price; this variety was raised by the Rev. S. B. Ward, of Telfont, in 1835, and was purchased by the Messrs. Brown for £60. Yellow Defiance, purchased by the same firm, at £200, the highest amount, we believe, ever given for a dahlia; it was sent out in 1840. Essex Triumph raised in 1841, was sent out in 1843, at £60. Marchioness of Ormond, £100. Shyllock, Beeswing, Alice, and Cleopatra for £100 each. Lady Sale, £70. Nonpareil, Sir John Richardson, Duke of Wellington, Bob. Sir. R. Whittington, and British Queen, £50 each. And Queen Victoria came out in 1835, £105. We have not heard of such prices being obtained since.—*Scottish Farmer.*

TAKE CARE OF YOUR POOR FEET.—"Of all parts of the body," says Dr. Robertson, "there is not one which ought to be so carefully attended to as the feet." Every person knows from experience that colds and many other diseases which proceed from colds are attributable to cold feet, the feet are at such a distance from "the wheel at the cistern" of the system that the circulation of the blood may be very easily checked there. Yet, for all this, and although every person of common sense should be aware of the truth of what we have stated, there is no part of the human body so much trilled with as the feet. The Young and would-be genteel-footed cram their toes and feet into thin-soled bone-pinching boots and shoes, in order to display neat feet, in the fashionable sense of the term. There is one great evil against which every person should be on their guard, and it is one which is not often guarded against—we mean the changing of warm for cold boots or shoes. A change is often made from thick to thin-soled shoes, without reflecting upon the consequences which might ensue. In cold weather boots and shoes of good thick leather both in soles and uppers, should be worn by all. Water-tights are not good if they are air-tights also. India-rubber overshoes should never be worn except in wet splashy weather, and not very long at once. It is hurtful to the feet to wear any covering that is air-tight over them, and for this reason India rubber should be worn as seldom as possible. No part of the body should be allowed to have a covering that entirely obstructs the passage of carbonic acid gas

from the pores of the skin outwards, and the moderate passage of the air inward to the skin. Life can be destroyed in a very short time by entirely closing up the pores of the skin. Good warm stockings and thick-soled boots and shoes are conservators of health, and consequently of human happiness.

COAL ASHES FOR GARDEN WALKS.—As many persons have at this time large heaps of coal ashes, they can dispose of them in no way to better advantage than by hauling them into their garden alleys. Remove from four to six inches of the dirt, and having screened the ashes, or separated the core and cinders, first apply the coarse stuff, then oyster shells if you have any on hand, small stones, glass or pieces of bricks, and top-dress with the ashes. Roll it, and you will have one of the best walks ever seen in a garden. The ashes become very hard, and are never wet, winter or summer, if the weather gives the water the least chance to get away. In summer, in five minutes after a shower there will be scarcely enough moisture to dampen the soles of your shoes. If there is not sufficient ashes for all the walks, commence with the principle ones, and in a couple of years the garden will be complete. Then, each spring after, give them a slight top-dressing of the ashes, which will about consume your annual stock.—*Germantown Tele.*

CUT WORMS ON THE CABBAGE PLANT.—Mr. J. P. Jewett, of Lowell, writes to the Main Farmer, that after being baffled in his attempts to raise cabbages, by the depredations of the cut-worm, he adopted the plan of wrapping the stalk of each plant in paper, and succeeded. He says,—"I selected my plants, wet them, and wound a small piece of paper around the stem of each plant, commencing at the root and extending up, so as to enclose the stem and some of the lower leaves. It is easily done with the thumb and fore-finger, giving it a slight roll two or three times round, being damp, it easily retains its position." "In transplanting," he says, "let the paper be covered about half an inch with earth, while it extends up about an inch, and this is sufficient to protect the stem where the attack is always made." Mr. Jewett is entitled to the thanks of the community, for thus promulgating the results of his simple but sensible experiment. We know that many persons have been obliged to abandon the cultivation of cabbages because of the ravages of the cut-worm, who would gladly resume it if the paper wrappers will prevent the greedy vermin from destroying the young plants.

DISAPPEARANCE OF THE VINE DISEASE.—Dr. Telephe, of Bordeaux, has been the first to remark, that since the appearance of odium the large kinds of edible fungi, and especially

boleti, have disappeared from those localities where the vine has been diseased. This observation was made known in 1853 to the Linnean Society of Bordeaux: and it has been remarked that since the minute cryptogams (such as *Erysiphe oidium* on the vine, *Botrytis* on the potato, and *Ustilago carbo* on the maize) have been attacking and destroying these necessaries of life, so have the large kinds of mushrooms been comparatively rare. But since the autumn of 1862, the Agarics and Boleti have reappeared in great quantities about Bordeaux, and the markets of this large town have been encumbered with them. From this fact, Dr. Desmarts considers himself justified in fortelling the final disappearance before long of the vine disease.—*Les Mondes*.

LOVE OF THE FRENCH FOR FLOWERS.—The passionate love of flowers is a marked characteristic of the Parisians, and the sale of flowers is in Paris an extensive and lucrative branch of trade. It is computed that the various little patches of ground in the vicinity of the French capital, appropriated to floral cultivation, realize an annual income of 32,000,000*l.*, and give employment to 500,000 persons. In Paris alone there are no fewer than 294 florists, and on occasions of public festivity, their conjoint traffic not unfrequently amounts to 70,000*l.* At a *fete* given last season by one of the foreign ambassadors, the cost of the flowers was 22,000*l.*

HOW TO BLANCH CELERY FOR EXHIBITION.—Of all the exhibitions we have ever seen, Bolton, in Lancashire, takes the lead for the admirable manner in which the vegetables are staged, everything being so clean and orderly, even the potatoes, leeks, and celery, are as clean as new pins. What, however, struck us most, was the clear white color of the celery, from the root to nearly the top being quite free from diseased specks and discolorations. On enquiry, we find it is the practice not to earth up the celery at all, but simply to tie it up as it grows, and wrap coarse paper round it, occasionally removing it for the purpose of seeing that the stalks are growing straight, or to assist them in doing so, when wanted for exhibition purposes.—The flavor may not be quite so good, or quite so crisp, as when grown in the ordinary way, but the color is certainly much better for exhibition purposes when grown in this way, and is not inferior in size. The new imperial pink celery appears to us to be the best of the pink or red kinds for showing, as it produces very little heel, and is a large growing, solid, crisp, fine flavored kind. The new imperial white is fully equal to it, the only difference being in the color. In fact, the former, as shown at Bolton, was bleached to almost a clear white.—*Gossip of the Garden*.

CHINESE SHEEP IN EUROPE.—Mr. Legabb has presented to the Society of Acclimatization of Paris, three Chinese sheep, part of a flock he says he has had for several years, numbering at the present time more than three hundred. Their fecundity is remarkable. The ewes breed regularly twice a year, and produce from two to three lambs, and even up to five at each birth. The director of the School Farm of the Vosges, informs M. Legabbe that one ewe has produced ten lambs within the year. The wool is at least as good, he adds, as that of other sheep, but owing to the breeding habits of the females, the quantity is somewhat less. Although the ewes manifest no unwillingness to bring up their whole family, it has been found desirable to allow them to suckle only two lambs each, goats being kept as nurses. At a recent meeting of the above named society of Great Britain, it was stated that the flock of Chinese sheep were in a thriving condition; all that were offered for sale were readily purchased, and there is a demand for more. Lord Powerscourt reported the birth of four lambs in one of his ewes. Five lambs were added to the flock of the society in September.—*English Paper*.

BIRDS AS DESTROYERS OF INSECTS.—A distinguished naturalist, M. Florent Prevost, conceived the idea that it would be a matter of great interest to collect, at different periods of the year, the stomach of every description of bird he was enabled to procure, to examine and preserve its contents. This collection, commenced thirty-five years since, has now reached a considerable size. The stomachs, opened and dried, together with their contents, are fixed on cardboard, upon which are inscribed, besides the name of the species of the bird, the indication of the locality and the date of its death, together with the names of the animals or plants which have been recognised as forming part of the contents of its stomach. It results from these researches that birds are in general far more useful than hurtful to the agriculturist, and that the mischief done at certain periods by the granivorous species is largely compensated by the consumption of insects they effect at other periods.—*Medical Times*.

RICE AS FOOD IN INDIA.—Rice is the favorite food of the people of India; but, except in Arracan and a few other districts in which it constitutes the chief and almost only article cultivated, its use is confined to the richer classes throughout the country. Millet constitutes the chief grain food of a considerable portion of the people. The average annual export of rice from America for the past eight years has been 112,000 tons. The Burmese recognize nearly a hundred varieties of rice, but the principal distinctions between different kinds are as follows:—hard grain, soft

rain and glutinous rice. The Natslong is the hardest grain and is the rice which is principally shipped to Europe. The Meedo is the chief of the soft grain varieties. It is much preferred by the Burmese to the hard-grained sorts, and it is certainly superior in taste when cooked; but the hard-grained rice is chiefly purchased by the merchants for export, as it keeps better, and the soft-grained rice is too much broken by European machinery in cleaning. Latterly, on the continent, his last objection appears to have been overcome, and a greater demand is constantly bringing up for the meedo rice for the markets of Europe. The Koungnyeen or hill rice is called glutinous rice by Europeans, from the property it possesses, when cooked, of the grains all adhering in a thick glutinous mass. It is the chief article of food with the hill tribes, but it is not much eaten by the inhabitants of the low, swampy plains, where the common rice is grown. Rice is used as food for man, beast and bird, for the manufacture of starch, distillation of spirits, &c.

CHANGING HIS CLOTHES.—For sometime, writes the distinguished author of "British Butcheries," previous to changing his dress—even changing is nearly or quite suspended—the caterpillar becomes sluggish and shy, creeping away to some more secluded spot and there remaining until his time of trouble is over. Various writhings and contortions of the body now testify to the *mal-aise* of the creature in his old coat, which though, formed of a material capable of a moderate amount of stretching, soon becomes outgrown, and most uncomfortably ill-fitting, with such a quick-growing person inside of it; so off it must come; but it being provided with buttons, there's the rub. However, with a great deal of fidgeting and should-should-shoulding, he manages to tear his coat down the back, and lastly, by patient efforts, shuffles off the old rag; when lo! underneath, is a luscious new garment somewhat similar, but not exactly a copy of the last, for our beau has his peculiar dress for each epoch of his life—the best splendid being reserved for the last. This change of dress ("moulting") it is sometimes believed is repeated thrice at least in the creature's life, but more generally five or six times. Not only does the outer husk come off at these times but, wonderful to relate! the lining membrane of all the digestive passages, and of the large breathing tubes is cast off and renewed.

USE OF ICE.—To drink ice cold liquid at meals retards digestion, chills the body and has been known to induce the most dangerous internal congestions. On the other hand, ice itself may be taken as freely as possible, not only without injury, but with the most striking advantage in dangerous forms of disease. If broken in sizes of a pea or bean, and swallowed freely as practicable, without much chewing

or crushing between, it will often be efficient in checking various kinds of diarrhoea, and has cured violent cases of Asiatic cholera. A kind of cushion of powdered ice kept to the entire scalp, has allayed inflammation of the brain, and arrested fearful convulsions, induced by too much blood there. Water as cold as ice can make it applied freely to the throat, neck and chest, with a sponge or cloth, very often affords miraculous relief, and if this be followed by drinking copiously of the same ice-cold element, the wetted parts wiped dry, and the child be wrapped up well in the bed clothes it falls into a delightful and life giving slumber. All inflammations, external or internal, are promptly subdued by the application of ice or water, because it is converted into steam and rapidly conveys away the extra heat, and also diminishes the quantity of blood in the vessels of the part. A piece of ice laid on the wrist, will often arrest violent bleeding at the nose.—*Hall's Journal of Health.*

CITY HAYMAKERS.—Such was the surrounding of one city church-yard that I saw last summer on a Volunteering Saturday evening, towards 8 of the clock, when with astonishment I beheld an old man and an old woman in it making hay. Yes, of all occupations in this world, making hay! It was a very confined patch of churchyard, lying between Grace-church street and the Tower, capable of yielding, say an apronful of hay. By what means the old man and woman had got into it with an almost toothless hay-making rake, I could not fathom. No open window was within view; no window at all was within view sufficiently near the ground to have enabled their old legs to descend from it; the rusty churchyard gate was locked, the moldy church was locked. Gravely among the graves they made hay, all alone by themselves. They looked like Time and his wife. There was but one rake between them, which they both had hold of in a pastorally loving manner; and there was hay on the old woman's black bonnet, as if the old man had recently been playful. The old man was quite an obsolete old man, in knee-breeches and coarse gray stockings; and the old woman wore mittins like unto his stockings; in texture and in color. They took no heed of me as I looked on, unable to account for them. The old woman was much too bright for a peewopener; the old man much too meek for a beadle. On an old tombstone in the foreground, between me and them, were two cherubims; but for those celestial embellishments being represented as having no possible use for knee-breeches, stockings or mittins, I should have compared them with the haymakers, and sought a likeness. I coughed and awoke the echoes; but the haymakers never looked at me. They used the rake with a measured action, drawing the scanty crop towards them; and so I was fain to leave them under three yards and a half of darkening sky, garvelly making hay among the

graves; all alone by themselves. Perhaps they were spectres, and I wanted a medium.—*Dickins's All the Year Round.*

SPORTING CHALLENGE FROM VICTORIA.—

Austria challenged England in Cricket, and, as the result proved got well beaten. Victoria now issues a challenge to English sportsmen to a match for £10,000, between English race-horses and the best of our Australian breeds, the race to be run in this province. The proposition, as it at present stands, is somewhat in this form: a match for 5000 sovs. a side; weight for age; three miles on the Melbourne course. The number of English horses to be named unlimited. The colonies to be restricted to naming twenty. one to the post, &c. This would give us a match between the best horse in Australia and the best that England would send us. The amount has been already subscribed here; and Mr. Walter Craig, of Ballarat, a right good sportsman, who goes home by Great Britain on the 1st of May, has been authorised to make the match, and to deposit a certain proportion of the stakes. Surely some adventurous spirits will be found in the old country to take up the gauntlet thus thrown down. Horses which are second-class in first-rate fields would be most formidable here, and would be all but certain of carrying off the stakes. Whilst on the subject of sporting, it may not be amiss to mention that already preparations are being made to receive with a proper amount of *eclat* the team of cricketers who are expected to do battle for the honour of their country early next year. Passages have been secured for the whole of them by the Great Britain steamer on her return voyage from England in September next.

SURGERY IN AFGHANISTAN.—The Afshans, from their rough and hardy life, acquire by experience very practical, though, to be sure, uncouth, methods of righting themselves, their horses and cattle, when they may suffer from accidents. Their operations for the reductions of dislocations in the human subject are most original; and, if report speaks at all truly, equally successful.

For a dislocation of the thigh, the unfortunate patient is sweated and starved for three days in a dark room, the atmosphere of which is heated by fires kept going night and day; and the effects of this high temperature are increased by drenching the patient with copious draughts of warm rice-water or thin gruel. During the interval that this treatment is enforced on the patient, a fat bullock is tied up and fed *ad libitum*, with chopped straw flavoured with salt, but is rigidly denied a drop of water. On the third day the patient is made to ride the bullock or buffalo astride, a felt alone intervening between him and the animal's hide; his feet are next drawn down and fastened tightly under the animal's belly by cords passing round the ankles. All these pre-

liminaries arranged, the animal is then led or to water, and drinks so greedily and inordinately that its belly swells to nearly double its former size. The traction produced by this on the dislocated limb is sufficient to bring the wandering bone to its socket.

The method of reducing a dislocated shoulder is quite as curious and interesting. It is managed thus; the hand of the dislocated limb is firmly fixed as close to the opposite shoulder as it can well be, by cords tied round the waist; between the bend of the elbow and the chest is placed an empty "masak" (a goat skin water bag, in common use throughout Oriental countries as a means of carrying water), which is gradually filled with water; the weight of this suffices to overcome the resistance of the muscles before they have borne it a quarter of an hour, and the head of the bone flies back to the socket with its usual sound. Most masaks, when full, weigh less than upon a hundred weight, and many much more than this.

For a reduction of dislocation of the ankle joint, the injured extremity is placed in a hole dug in the ground and covered over with soft earth, which is firmly pressed down by stamping. The limb is then pulled out by force, with the joint returning to its natural position.

VEGETATION ON THE AMAZON.—The magic beauty of tropical vegetation reveals itself in all its glory to the traveller who steers a boat through the solitude of these aquatic mazes. Here the forest forms a canopy over his head; there it opens, allowing the sun to shine to disclose the secrets of the wilderness while on either side the eye penetrates through beautiful vistas into the depths of the wood. Sometimes on a higher spot of ground a clump of trees forms an island worthy an Eden. A chaos of bush ropes and creepers sling its green flowers over the forest, and fills the air with the sweetest odor. Numerous birds, partly rivalling in beauty of colour, the passerines and bignonias of these hanging gardens, animate the banks of the lagune, while gaudy macaws perch on the loftiest trees; and, as to remind one that death is not banished from this scene of Paradise, a dark-robed vulture screeches through the woods, or an alligator rests like a black log of wood, or a sombrous rock, on the tranquil waters. Well he knows that food will not be wanting; for river tortoises and large fish are fond of retiring to these legunes. * * * If the Nile—so remarkable for its historical recollections, which carry us far back into the bygone ages—the Thames, unparalled by the greatness of commerce which far eclipses that of ancient Carthage and Tyre—may justly be called the rivers of the past and the present, the Amazon has equal claims to be called the stream of the future; for a more splendid field nowhere lies open to the enterprise of man.—*Tropical World.*

Editorial Notices, &c.

THE BRITISH AMERICAN, August, 1863. Toronto; Rollo & Adam, King Street.

This well conducted monthly, devoted to literature, science and art, has attained to its eighth number, and evinces a steady progress, fully sustaining the high anticipations formed of it at the commencement. The present number contains an elaborate article from the editor, Professor Hind, on the Cultivation and Manufacture of Flax and Hemp in Canada. We had intended to present our readers with some extracts from this valuable paper, but it should be read as a whole, and we trust that most of our surprising farmers and manufacturers will purchase it in the Magazine itself. The Hon. Mr. Gee's paper, entitled A Plea for British American Nationality, is well worth a thoughtful perusal at the present time, so pregnant with great events both in the old world and the new. There are several other original articles belonging to a lighter literature, that will prove very generally interesting. The present number contains several able reviews of important works recently published, among them Baron Liebig's Treatise of Husbandry, giving us the matured views of that eminent philosopher on a subject of such vital interest to our readers as agriculture. A vast amount of useful and interesting information is given in the department of periodical literature; in which the reader will find discriminating notices of the leading Magazines and Reviews, both British and American. This fine production is deserving, as we are glad to be informed it is steadily obtaining, general sale throughout the British Provinces. Price \$3 per annum.

EDINBURGH REVIEW; July, 1863. Leonard Scott & Co, 38 Walker Street. New York. The contents of this number of the *Edinburgh*, the oldest of the British Quarterlies, more than usually varied and interesting. Pier's Memorials of Claverhouse; Druids and Druids; Fergusson's History of the Modern Elements of Architecture; Louis Blanc's French Revolution; Sir George Cornwall Lewis on the Principles of Government; Xavier Raymond on the Navies of France and England; The Sources of the Nile; The Scots in France;—the French in Scotland; and Lyall on the Antiquity of War.

BLACKWOODS' MAGAZINE for July, contains the continuation of Cantoniana; From Cracow to Moscow; Ireland Revisited; Why has not Italy done more?; The London Art Season; Pen and Ink Photographs from Berlin; The Perpetual Curate; and the State and Prospects of the Church of England.

These numbers of the Edinburgh and Blackwood, commence new volumes of the celebrated and long established periodicals, and the present is therefore a convenient time to commence subscribing. The Messrs. Scott & Co., also reprint the three other leading British Quarterlies; viz. The London Quarterly Review; The North British, and the Westminster, comprising the cream of British science and literature, and all shades of politics. The advantage of clubbing will be seen from the following table of rates:—

For any of the four Reviews.....	\$3 00
For any two of the four Reviews...	5 00
For any three of the four Reviews .	7 00
For all four of the Reviews.....	8 00
For Blackwood's Magazine	3 00
For Blackwood and two Reviews...	7 00
For Blackwood and three Reviews.	9 00
For Blackwood and four Reviews..	10 00

We observe that the Messrs. Scott & Co., have just brought out a new edition of THE FARMER'S GUIDE, being a reprint of Stevens's well known Book of THE FARM, with the appendix adapting it to the wants of farmers on this side of the Atlantic by the late Professor Norton of Yale College. This is universally acknowledged as the most complete work on scientific and practical agriculture in the English language. The American edition consists of 2 handsome Royal octavo vols. of 1600 pages and numerous well executed engravings. Price \$6: being but a little more than a third of the original work in England. No farmer with any desire for improvement ought to be without it.

THE HORTICULTURIST AND JOURNAL OF RURAL ART AND TASTE.

The August numbers of this old and valuable serial is to hand, and is replete, as usual, with articles of first rate merit on the various branches of the beautiful art of Horticulture. The wood cuts are excellent illustrations of the matter treated of in the text. Published monthly by the Editors, Mead & Woodward, 37 Park Row, New York, at \$2,00 per annum.

THE GARDENER'S MONTHLY for August. W. G. P. Brinkloc, 23 North Sixth Street, Philadelphia; and C. M. Saxton, 25 Park Row, New York.

This periodical has entered its fifth year, and has maintained throughout its career a steady progress and improvement. It is edited by Mr. Thos. Meehan, a well-known practical horticulturist. Its pages are always filled with matter of practical value to all owners of gardens, whether large or small. Terms \$1 50 per annum.

THE CANADIAN ILLUSTRATED NEWS, a weekly paper, published at Hamilton, C. W., at \$3,00 per annum.

We had some misgiving when this paper first started of its success. Knowing the difficulties and expense of commencing and sustaining the publication of a respectably illustrated sheet in a new country, we are most agreeably disappointed in finding the *Canadian Illustrated* not only continued but vastly improved, both in a literary and artistic point of view. The engravings on the whole are decidedly good; many of them would be creditable to similar publications in older and wealthier countries. We trust that the enterprising publishers will meet with a sufficient encouragement to preserve and improve. This they can only do by the aid of a large number of subscribers, who, we are informed, are steadily increasing. It is a most suitable paper for Canadians to send to their friends in Europe. The racy pen of its principal editor, Alexander Somerville, well known in Britain during the anti corn law controversy, as "one who had whistled at the plough," is distinctly tangible in most of its leading articles.

THE SCIENTIFIC AMERICAN, a weekly journal of Practical information in Art, Science, Mechanics, Chemistry and Manufactures, \$3,00 per annum, Meehan & Co, 37 Park Row, New York.

This old established paper continues to occupy the foremost rank on this continent as a popular and practical instructor in the application of the principles of science to the various arts and purposes of life. While it is indispensable to that numerous class who are commercially engaged in mechanical and man-

ufacturing pursuits, much will be found in pages suited to the taste and wants of farmer and in fact, to all that are actuated by the laudable desire of obtaining useful knowledge. The illustrations are numerous, many from correct drawings, and executed in the highest style of the art.

CALIFORNIA WINE, WOOL & STOCK JOURNAL

We have received the July number of this new monthly, which is got up in the best style; its external appearance is quite attractive and its internal contents not less so. Judging from this number, and the *California Farmer*, with which our table has been regularly furnished for some time, that extensive region once distinguished for its gold and afterwards for its flocks and herds, is now admirably suited to the culture of the grape and the manufacture of wine. In Agriculture also it is found to possess innumerable capabilities. We will again refer to these matters more at length.

AGRICULTURAL REPORT FOR THE PROVINCE

NOVA SCOTIA, Halifax, N. S., 1863.

We have been favoured with a copy of Mr. Forrester's interesting Report, but must defer notice of its contents till our next.

THE PROVINCIAL EXHIBITION.—We wish to correct an omission which occurred in printing of the Prize List and Rules: Regulations for the Provincial Exhibition and which it is now too late to remedy in proper place. In the list of the Local Committee, on the second page of the pamphlet, names of Mr. Sheriff Corbett and Dr. Litchfield were inadvertently omitted. These gentlemen have both been members of the Local Committee from its formation, Dr. Litchfield being Corresponding Secretary.

BLOOD STALLION FOR SALE

FOR SALE, a Blood Stallion, "*High Fly*" six years old, bright bay, 15 hands $3\frac{1}{2}$ inches high; Sire "*Sir Tatton Sykes*," dam "*Somonocodrom*."

Terms cash, or six months' credit on security. Apply to

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March 20th, 1863.

TORONTO MARKET PRICES.

Toronto, August 31, 1863.

Wheat, per bushel.....	\$0 80 to \$0 88
Spring Wheat, ".....	76 " 82
Wheat, ".....	60 " 64
Barley, ".....	35 " 40
Oats, ".....	45 " 46
Rye, ".....	56 " 60
Feed, ".....	4 00 " 5 00
Cotton, ".....	4 00 " 4 50
Statons, per bushel.....	35 " 40
Apples.....	1 25 " 2 00
Cash Butter, per lb.,.....	18 " 20
Eggs, per doz.....	11 " 12
Chickens,.....	30 " 40
Doves, each,.....	4 00 " 6 00
Geese, each.....	3 00 " 4 00
Swans, each.....	2 00 " 3 00
Sheep, per 100 lbs.....	3 00 " 5 00
Hay, per ton.....	8 00 " 10 00
Straw, ".....	7 00 " 8 00
Wool, per 100 lbs.....	4 50 " 5 00
Woolskins, per lb.....	8 " 9
Sheep Skins.....	25 " 30
Woolskins, each.....	50 " 60
Wool, per lb.....	35 " 37
Wine of Paris, per barrel..	95 " 1 00
Whisky, per bbl.....	1 45 " 1 47

THOROUGH-BRED AYRSHIRES FOR SALE,

Apply to

R. L. DENISON,
Dover Court.

Aug. 20th, 1863.

Coe's Super-Phosphate of Lime FOR WHEAT.THE following testimony is from an extensive
Wheat-grower, and the best of authority:

{ Near Frederick, Frederick Co., Md.,
January 2, 1863.

DEAR SIR,—I have used Coe's Super-phosphate of Lime for several years past with unqualified success, and last season it proved particularly satisfactory. Ten acres of land which is more than an ordinary poor quality was treated in the following manner:—On one half piece I used Coe's Super-phosphate, at the rate of 200 lbs. to the acre; on the other half I used Guano at the same rate, and sowed wheat. On the five acres on which I used Super-phosphate, I had at least twenty-five per cent. more wheat, and the berry was much larger and of a nicer quality than where the Guano was used, and also the straw was much the heaviest where the Phosphate was used. I have used Coe's Phosphate in different ways, and on different crops, and the results have been highly satisfactory.

Very truly yours,
JOHN H. DETRICK.

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MORETON DUKE, got by Mr. Stone's Bull 3rd Grand Duke, 2292, calved 9th June, 1860.

William of Oxford, got by Mr. Stone's Bull 12th Duke of Oxford, calved 19th November 1859.

David, got by Sir Charles, a son of 3rd Grand Duke, calved 1st March 1861.

Marquis of Oxford, got by William of Oxford, calved 20th March 1863.

Warwick, got by Moreton Duke, calved 26th March 1863.

Terms very reasonable.

W. WILLCOCKS BALDWIN.

Larchmere, Oak Ridges.

April, 1863.

tf.

THOROUGH BRED STOCK.

THREE yearling Durham Bull two Galloway Bull Calves, two imported Ayrshire Bulls, yearlings, for sale.

GEORGE MILLER,

Markham.

April, 1863.

tf.

THE CANADIAN AGRICULTURIST

AND JOURNAL OF THE
BOARD OF AGRICULTURE
OF UPPER CANADA.

THIS LONG ESTABLISHED PERIODICAL is published in Toronto on the 1st of each month, making 12 numbers in the year.

Each number contains not less than 40 pages, the size of the page of this Prize List, occasionally illustrated by Wood Cuts, thus giving a large and handsome volume of about 500 pages.

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Single copies, 50 cents a year.

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Professor Buckland, University College, Toronto. Hugh C. Thomson, Secretary Board of Agriculture of Upper Canada. Andrew Smith, Licentiate of the Edinburgh Veterinary College and Consulting Surgeon to the Board of Agriculture of Upper Canada.

All orders to be addressed to the Secretary of the Board of Agriculture, Toronto.

The back numbers of the present volume can still be supplied at the above rates.

Orders for the half volume, commencing 1st July, taken at 25 cts. per copy; discount for a number of copies in same proportion as above.

AGRICULTURIST OFFICE. }
Toronto, June, 1863. }

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TORONTO, Dec. 16th, 1862.

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 " " wood Nos. 4 & 5 10.00 "
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 Straw Cutters, for horse or hand
 power..... 30.00 "
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JAMES FLEMING & Co.

TORONTO, Dec. 16th, 1862.

Miscellaneous Articles.

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THE PROVINCIAL EXHIBITION

OF THE

AGRICULTURAL ASSOCIATION
OF UPPER CANADA,

Will be held at Kingston,

On the 21st to 25th September next.

PERSONS INTENDING TO EXHIBIT will please take notice that the entries of articles in the respective classes must be made with the Secretary, at Toronto, on or before the undermentioned dates, viz.,

Horses, Cattle, Sheep, Swine, Poultry, on or before Saturday, August 15th.

Grain, Field Roots, and other Farm Products, Agricultural implements, Machinery, and Manufactures generally, Saturday, August 29th.

Horticultural Products, Ladies' Work, the Fine Arts, &c., Saturday, September 12th.

Prize Lists and Blank Forms for making the entries upon, can be obtained of the Secretaries of all Agricultural Societies and Mechanical Institutes throughout the Province.

HUGH C. THOMSON,

Sec'y Board of Agriculture.

Toronto, July 28, 1863.