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Hints for July.

Hay cutting will have commenced in many parts of the Province before the first of this month. Clover should be cut as soon as it is fully in blossom and a portion of the blossoms have faded. If left too long the stems of the plant become dry and woody, and the leaves and tops break off and are lost. Clover hay in making should not be exposed too much to the weather. If dried too much it will not be so nutritive, or so much relished by the cattle. A good deal of argument has been expended upon the question of the proper time to cut timothy. Some have contended that the seed should be allowed to ripen, or nearly so, for the sake of its value as food, that this will more than repay for any deterioration in the quality of the stem and leaves, and that the weight of the whole crop will be increased thereby. But experience and observation will show that the same rule will apply to timothy as to clover, viz: that it should be cut when in full blossom. It is at this time that the plant contains the most saccharine matter, before it has been absorbed in the formation of seed, and the hay cut at this time is the sweetest, most nutritious, and most palatable to cattle. Let any one attend an auction sale of hay, and he will find that that which is green colored and succulent looking, will always command a higher price than that that is fully ripened and coarser in appearance, the buyers thus giving the strongest testimony that their experience has shown them the greater value of

the early cut hay. Anything that may be lost in weight by early cutting will be made up by the superior quality of the article. Besides, when there is a considerable breadth of meadow to be mown, there is a much better chance of being able to take advantage of favorable weather, and to get the crop secured in good average condition before grain harvest comes on, by commencing a little too soon than a little too late.

Wheat and barley harvest will commence in some parts of the province about the middle of the month. To secure the greatest weight of wheat, the finest quality for flouring purposes, the least amount of bran and offal, the least loss in harvesting, and the best quality of straw for fodder, wheat should be cut before it has got quite out of the milky state, that is about a week before being fully ripe, and when the straw has turned yellow about half way down the stalk. For seed, perhaps it is better to leave it standing till fully ripe. The efficient machines and implements now manufactured in different parts of the country for harvesting purposes, and coming into pretty general use, enable the farmer to get through the important operations of this busy season much more easily and expeditiously than he could in former times, when all the laborious work of mowing, reaping, raking, &c had to be done by human hands and arms. Those owning large farms and who have not yet provided themselves with mowing and reaping machines, by obtaining such implements from our best makers, would very soon find the

cost returned to them in the saving of labor, the superior execution of the work and the avoidance of waste.

We have heard pretty strong complaints of the depredations of the midge this summer. In some of the western parts of the province it is said to be devouring the wheat almost totally. In fields in the neighbourhood of Toronto, the midge is to be found, but where the wheat was sown early and stood the winter well, not in such quantities as last year. We are of opinion that the reliable remedy for the midge will be found in high farming, clean culture, thorough draining, sowing early, and early kinds of seed. Wheat should not be sown on the same ground more than once in five, six, or seven years. Clay land should be clean and free from weeds or grass, but not made too fine. It should be somewhat rough and cloddy when sown; if old meadow the sods should be thoroughly decomposed, but not too much torn to pieces by over cultivation. If the soil is made too fine the plant is much more apt to be thrown out of the ground by the winter and spring frosts. If it is found that the fall wheat can not be grown by adopting the best systems of cultivation known, then of course the remedy must be to fall back upon spring wheat, sowing the kinds which will mature late, as has been already done with great success in different parts of the province.

There are still some crops which may be sown with advantage during this month. Buckwheat may be sown in the beginning of the month for the grain, and later for ploughing down for manure; if for the latter purpose it should be sown pretty thickly. Chinese millet may be sown for winter fodder or soiling; half a bushel of seed to the acre. Indian corn for soiling. White Turnips may be sown all this month; and the stubble, or six weeks turnip, as late as the middle of August, and produce a valuable crop. The following are a few of the varieties of Turnips which may yet be sown, the seed of any of which, as well as several others, can be obtained of Mr. Fleming and probably other seedsmen of this city. The White Globe, a large root, very productive, fit for fall use. The Yellow Bullock, or Aberdeen, a good producer, keeps well during the winter, excellent for feeding. Yellow Altringham, not quite so large as the Aberdeen, but of excellent quality for the table, and well adapted for market. Waites' Eclipse, a new variety here, yellow, with purple top, grows a

large size, very good for feeding purposes. It is a most encouraging evidence of the progress our farmers are making in the improvement of their general system of husbandry, to find the cultivation of turnips and other roots increasing so largely as it has done within a few years. We believe that at least ten times the breadth of root crops is now sown that was sown a few years ago. Mr. Fleming alone, one of the seedsmen of this city, has this year sold over a hundred bushels of Swede turnip seed, not to mention mangels, carrots, white turnips and other varieties.

Put the Cultivator and hand hoe frequently through the drilled crops this month, to stir the ground and keep down the weeds.

The Provincial Exhibition.

The Board of Agriculture held a meeting at Hamilton on the 19th and 20th June, for the purpose of consulting with the Local Committee, and making the necessary arrangements in reference to the approaching exhibition. The preparations were found in a satisfactory state of forwardness, the committee and the contractors having evidently set to work in the most energetic manner. The ground plan of the Crystal Palace was originally in the form of a Greek Cross, the transept being 171 feet in length by 68 in breadth, but it has since been decided to fill in the angles of the lower story, converting it into an octagon of 171 feet diameter, thus adding considerably to the Exhibition space, which will be altogether something more than that of the Building at Toronto. The upper part of the building will preserve the original plan. The building will consist of two stories. The centre of the roof will have an elevation of about 60 feet, and the top of the dome of 128 feet, so that standing as it does on high ground, the palace will present a very commanding appearance. The foundation is of solid stone masonry, and the floors and all of the work of the most substantial character.

The accommodations for the cattle, horses, &c. will be of a better description than at any of our previous shows. There will be about a hundred horse stalls 12 feet by 6, with good plank floor partitions and double doors. There will be 100 cattle stalls, 100 sheep pens, 80 pig pens, &c. Water will be plentifully supplied from the city.

water works to the Palace, and conveyed in troughs or pipes all around the grounds to the horse and cattle stalls.

The area of the Exhibition ground is nearly 20 acres. The surface, being somewhat undulating, will add to the picturesqueness of the Exhibition, and the soil is of a description that will be dry and firm to the foot in any sort of weather. From any part of the grounds a charming view of the surrounding scenery can be obtained. The building is to cost about \$21,000, and is contracted for to be finished on the 1st September. We do not doubt that it will be ready, and that the Exhibition will be one of the best, if not altogether the best, which has yet been held in the Province.

We had hoped to have been able to publish the Prize list in this number. The uncertainty however still attending the visit of His Royal Highness the Prince of Wales, and also the distribution of the special government grant, has prevented the arrangements being positively announced. The list will if possible appear in our next issue. In the mean time, exhibitors cannot go far wrong if they take the list of last year for their guidance.

Before leaving Hamilton, the Board of Agriculture were invited to visit the new Water Works of that city. These are works of which not only Hamilton as a city, but Upper Canada as a country may well be proud. For a city of the population and recent growth of Hamilton to construct water works costing nearly £200,000 is certainly a bold undertaking. But the work is now done, and done on a scale which will provide against the necessity of a repetition of the undertaking for generations to come. The admirable manner in which the work has been executed reflects high credit upon the Canadian Engineer, Mr. T. C. Keefer, who designed and superintended it, and the beautiful and immense powerful machinery by which the water is elevated from Lake Ontario, built by Mr. Garton of Dundas, at a cost of about £25,000, shows that we have mechanics in Canada, who need not fear competition in similar work, if they only have equal opportunity afforded them, from any quarter whatever. The beautiful scenery to be found during the drive of six or eight miles in the country, on visiting the works, particularly that from the Mountain, about half way up which the reservoir is situated, like a small lake, as well as the inspection of the works

themselves, renders the excursion a most interesting and agreeable one.

The Massachusetts Cattle Disease.

The farmers of Canada, as well as the public generally, cannot be too much upon the alert against the introduction of this destructive disease. Government ought to be memorialized to adopt precautionary measures to prevent the importation of diseased cattle, or, should the disease unfortunately be introduced, to prevent it spreading. The subject is one of the greatest possible importance. A report was lately circulated that the disease had appeared in Lower Canada, and some cattle were supposed to have died of it in Huntingdon, C. E. There is however every reason to believe that these animals were affected by some other disease than Pleuro-Pneumonia. There is no evidence of the disease having yet appeared in the Province. But without proper precaution it may be introduced at any moment. All experience so far on this continent goes to show that the disease is only propagated by contagion. We have therefore got the prevention and control of it very much in our own hands, and by due precaution and promptitude we may perhaps succeed in keeping it away from our cattle herds. Had the people of Massachusetts understood the nature of the disease at first, and had the Legislature acted with sufficient promptness, it might probably have been controlled and banished at less than a tithe of the cost to the state and to the owners of cattle which will now be incurred. We gave a full history of the progress of the disease in our last. The appropriation by the State Legislature of \$10,000 having been found inadequate to its extirpation, an extra session was convened about the beginning of June, and closed on the 13th. Its action upon the subject is embraced in two bills. They give powers to the municipal authorities to kill or isolate cattle and make other regulations for the treatment and extirpation of the pleuro-pneumonia; they increase the State Commission to five members, and provide in addition for a Board of Examiners to make a scientific investigation. To carry into effect all these provisions, an appropriation of \$100,000 was made. Of this sum \$15,000 are required in addition to \$10,000 appropriated at the last session, to pay expenditures already incurred; \$10,000 is for the Board of Examiners; leaving \$75,000 for other purposes, including the reimburse-

ment to cities and towns of four-fifths of the expenses incurred by them for isolation and killing.

Editorial Correspondence.

(No. 1)

MANCHESTER, June 5th, 1860.

In the midst of the busiest hive of human industry in the world I resume my pen in the service of the *Agriculturist*, and commence by sending a few hurried jottings by the way. As yet I can communicate but little that is agricultural, having seen for the past fortnight scarcely any thing but the broad expanse of the Atlantic; with the exception however of forests of shipping in the vast docks of Liverpool, and innumerable factories and workshops, which so largely contribute to England's wealth and power.

I may commence by observing that I left Toronto by rail on the evening of May 16, and was fortunate in finding in the carriage Mr. John Wade, the President of the Provincial Association, with whom, and some others, interested in agricultural pursuits, a very interesting conversation on these matters was carried on till we arrived at Port Hope. The late William Cobbett, as an agriculturist, was the principal theme; and it is a little curious that within these few days I have heard the merits of the same gentleman in a political point of view highly extolled by several of his personal friends in this neighborhood,—Mr. Cobbett having represented the Borough of Oldham in Parliament for several years; a duty that is now performed by one of his sons. Cobbett had unquestionably a good practical knowledge of farming and gardening as practised in his day; but he was unacquainted with those sciences which suggest new and improved principles and explain old ones. In presenting the world with an improved edition of Tull's System of Husbandry, he rendered an important service to Agriculture. His Rural Rides contain the most graphic descriptions of English scenery and rustic pursuits; but their beauty is unfortunately defaced by the too frequent introduction of political venom and sheer personal abuse, in which Cobbett was as complete a master as he is universally admitted to be in pure Saxon English. As a descriptive agricultural writer he bears no comparison with Arthur Young, from whose tours any one may form a

pret. full and correct idea of the state of agriculture in his day, while in vain we look to the writings of Cobbett for satisfactory information on the existing state and various details of farming practice.

I spent Thursday in Montreal, and had an agreeable interview with Mr. Perrault, the zealous Secretary of the Lower Canada Board of Agriculture, and with Mr. Anderson, of the Board of Arts, who also conducts the English edition of the *Journal of Agriculture*. Great preparations were making for the reception of the Prince of Wales, and an extensive Exhibition Building, I observed, was in the course of erection. Let us hope that all will cordially unite their efforts to make the inauguration of that stupendous Bridge worthy of the occasion.

In travelling from Montreal to Quebec, I fell in with a party who was going to examine the country about Acton, where it is said copper exists in considerable purity and abundance. It is a little curious that one of the party proposed a theory similar to that of Jethro Tull, which I had been discussing last evening, in connection with the name of Cobbett. He stoutly maintained that all the organic food which plants require can be obtained from the atmosphere, and that the soil requires no manure, but simply deep and clean cultivation. The latter condition, by the bye, seldom obtains in American agriculture. It is a pity to find so many adhering to the errors of Tull, after he, by riper observation and experience, had renounced them.

Friday, I spent in Quebec, and found the Legislature about drawing its proceedings to a close. Mr. Hutton, of the department of Agriculture and Statistics, kindly furnished me with a quantity of reports, essays, &c., relative to the condition of Canada, and its advantages as a field for immigration: matters to which my attention has been already drawn by numerous individuals.

On the morning of the 19th, I set sail in the *Bohemian*, Captain Greaves, Commander. The rain poured down in torrents, and continued more or less till we reached the Gulf, thus unfortunately obscuring the beautiful and striking scenery of this magnificent river. In the Lower Province, rain was much wanted, as the crops were suffering severely from drought, and food had for some time been exhausted. The voyage across the Atlantic is usually monotonous; seldom affording any incidents of general interest. After encountering almost continuous head-wind

and rainy weather, we made the Cove of Cork, the most delightful port I ever saw, on the 30th, and reached Liverpool on the morning of Friday, June 1st. It is not a little singular that thirteen years ago this very day I left with my family this port for Canada! In again setting my foot on the shores of dear old England, a crowd of thoughts rushed into the mind; among them, I trust, a deep feeling of gratitude to that Providence, which is over all for good. I think it not right to remark that Captain Greaves is an able and cautious commander, and with his officers, maintains in a quiet and easy manner the most perfect order and discipline. I did not hear a single oath uttered during the whole of the passage. This line of steam ships is a credit, as will no doubt be highly useful to Canada.

After getting clear of the ship, I proceeded to the central meat and vegetable market. Owing to the excessively hard winter and late spring, both meat and vegetables are scarce and dear. Beef and mutton fetch from 9d. to 11d. per lb., and what I saw was not of the best quality. Spring Cabbages very small and dear. New potatoes 3d. per lb.; some of good size from Portugal, but those of English growth were not larger than walnuts. It is expected that with more genial weather the markets will be better supplied and that prices will diminish. Bread is by far the cheapest necessary of life.

As I was examining some Hereford steers and Leicester sheep opposite St. George's Hall, (of which latter I have seen superior in the Toronto markets) a fellow passenger called my attention to a performance that was about to take place at the great organ in this magnificent structure. Accordingly went in, but regret my want of facility and space to convey by words any intelligible idea of what I saw and heard. This noble building contains the Law Courts, Library, and sundry other apartments, and its architecture and decorations are most elaborate and striking. The central hall is nearly two hundred feet long and one hundred wide. The wind organ was constructed under the direction of Dr. Wesley, and is said to be twice the size of the famous organ of Haarlem. It possesses eight thousand pipes, ranging from three-eighths of an inch to thirty-two feet in length, with a compass of ten octaves. It contains, in fact, the organs, the great, the pedal, the solo, the bell, and the choir, and has upwards of a hundred stops. With such an instrument played by

the best performer in England, Mr. Best, the effect produced is indescribable. I felt that I was in quite another world than that in which I had lived and moved during the past fortnight. This being Whitsun-week, the great holiday week of all Lancashire, the Hall was densely crowded with country people of all ages, chiefly, I was glad to see, of the working classes. What a privilege and means of mental and spiritual elevation to hear in such a place, by such a performer, on such an instrument, a selection from the best works of Weber, Bishop, Haydn, and Handel! and all this for three pence each person! How rich in means is England for elevating the masses of her teeming population. Yet I grieve to say that scarcely had I got beyond the hearing of these devotional and soul inspiring tones, than I witnessed a scene that but too frequently disgraces the civilization of our modern cities. What an anomaly is man, that he should disgrace by vile passion the image in which he is created!

Something about agricultural matters, I hope, in my next.

G. B.

[No. 2.]

BENEDEN, KENT, June 12, 1860.

In travelling from Liverpool to Manchester, a distance of 32 miles, in one hour, but little opportunity is afforded for making agricultural observations. I was struck by the backwardness and generally unfavorable appearance of the crops. The land lying on the new red sandstone formation is warmer and drier than the clays resting on the low measures, where in consequence of the unusual amount of wet and cold, all kinds of crops were looking yellow and sickly. On Chatmoss there is a large area yet to be reclaimed, and the general appearance of this densely peopled district indicates that capital is wont to flow more freely into the channels of commerce and manufactures than into agriculture; a circumstance on many accounts to be regretted. It takes a series of years to bring this moss land into a proper state of cultivation. Large open ditches have first to be cut, which carry off an immense amount of water in the course of two or three years, and the moss slowly sinks and consolidates. Afterwards the draining has to be increased and perfected, the surface heavily dressed with marl and quick lime; the former being found in certain parts of the moss at depths varying from a dozen to twenty or more feet. This land when well managed will produce heavy crops of potatoes, turnips, clover, &c.; oats also do well, but for wheat it is indifferent, yielding a large amount

of straw, with thin and scanty grain. I knew Chatmoss before the railway, which now runs across it longitudinally, was made, or a single improvement commenced. The present appearance of the reclaimed portions is certainly striking and agreeable, indicating the triumphs of agricultural skill and industry during the last quarter of a century. Large dairies are kept in this district for supplying Liverpool, Manchester and contiguous towns with milk and butter: the former being regularly sent many miles night and morning, by rail, and is retailed to the consumer at three pence a quart. The time is fast approaching when Toronto will have to adopt a similar plan, and draw her supply of milk from a much larger area than at present.

In Manchester I found extraordinary improvements both in the increase and general appearance of the city, and the machinery of its innumerable factories and workshops. Its well paved and efficiently drained streets, the cleanly manner in which they are kept, and the consumption of smoke in the tall chimneys of its manufactories, render Manchester, notwithstanding the immense annual increase of its population, a far healthier and more desirable place of residence than it was twenty or thirty years ago. The demand for agricultural productions by the now well paid toiling millions of this interesting and wealthy district is immense; clearly indicating the intimate relation and mutual interests between the field and the factory. What a change has come over the views and feelings of the people of these nations since the repeal of the corn laws! Before, the agricultural and manufacturing interests were arrayed in deadly opposition, and in all the great centres of population the most levelling and democratic doctrines were proclaimed, with occasionally recurring tumults, that threatened the existence of the social fabric itself. Now, as far as I can see and learn, poverty and demagoguism seem to be banished from "merrie" England. And why? Simply because the great mass of the population—the producing class—are fully employed and well fed. Agriculture and manufactures have ceased to look upon each other as enemies, and have discovered that their true interests are identical, and consequently now cherish each other as indissoluble friends.

In Manchester I met with a number of commercial and literary men who take a lively interest in all questions that affect the physical and social condition of the people, not only of these realms, but of the empire, and the world. With reference to the religious, political, commercial, and agricultural state of Canada, I found several who professed a deep interest, and evinced no small amount of correct information. Emigration, education, and the state and prospects of our agriculture and public works, formed the chief topics of conversation; and I was grateful to find that fuller information was desired upon these matters. Our system of public instruction, I found, was generally ap-

proved of, as the one best suited to the wants of a mixed community, and I met with more than one individual well posted up, as the phrase is, in the history and present state of our Provincial University. Nearly all that I have heard speak on this question seem to agree that every practicable system of state education in mixed communities must be non-denominational. I met, however, with a gentleman of high literary standing and an influential contributor to several of the best English periodicals, who repudiated any connection between education and the state. The social evils arising out of sectarian jealousy under a state provision for education, it is argued, more than counter-balance the intellectual advantages that are obtained. I am told that quite a number of the deepest thinkers entertain similar views, and that an anti-state education party may already be said to exist in England. According to this theory each parent would select such kind of education for his children as he best approves, and pay for it, in precisely the same way as he does the bread. This indeed would be an extension of the free trade principle, and would place freedom for the mind and that for the body under exactly the same conditions. The effects of such a system, in young and struggling communities, at least, must be obvious; it would take many generations before anything approaching higher education could exist. I heard since I have been here similar notions propounded by able minds in relation to agriculture, science, and the industrial and decorative arts generally. In an old and wealthy country like England such objects and pursuits, after they are once established, may, perhaps, be safely left to the voluntary support of congregated individuals, but in a young and feeble country the case becomes entirely different. Where and what, may fairly be asked, would have been our numerous agricultural societies and the Provincial Association, if Government aid had been withheld?

In travelling from Manchester to London through the Great Northern Railway, the route through a portion of the richest agricultural districts in the centre of England. After leaving Derbyshire and a part of Yorkshire, where the scenery is hilly and wild, with narrow valleys highly productive as meadows or pastures, the country expands into a vast undulating plain admirably adapted to the purposes of tillage and abounding in varied and beautiful rural scenery, with, in most places, large fields, hedges neatly trimmed, and here and there clumps of deciduous trees, particularly around the farm homesteads, all tending to produce a landscape, which may be said to be peculiarly English. Here may be seen the drilling of grain whether of wheat, barley, oats, peas, beans, &c. executed in the neatest and exactest manner, mathematically straight and parallel lines. In several places might be seen the process of sowing and turning up by means of a large drill, which

posits in the most regular manner the seed and the manure with one operation. Large quantities of fine bone and rape dust, guano, &c., are used for manurial purposes.

In consequence of the cold and wetness of the spring, a state of things which I am sorry to say continues to the present date, the grain crops generally wore an unpromising aspect. This, I am informed, is generally the case throughout the British Islands. The wheat is thin upon the ground, very weakly, and will need warm and suitable weather immediately to realize an average crop. The prospect at present, I should say, is decidedly against an average being realized. Spring grain of all descriptions is looking indifferently, and the hay crop, unless more genial weather sets in, will be but indifferent. It has rained, more or less, almost every day, since I left Quebec on the 9th ult., to the present time, with a temperature many degrees below the average. The grain markets have therefore an upward tendency, and will soon assume, I fear, a serious aspect if the present weather should continue much longer. Crops, which are extensively cultivated in this part of the kingdom, are looking, I think, comparatively better than grain, but the prevailing wet and cold keeps them back. On naturally warm soils, and where the ground has been thoroughly drained, all kinds of crops are looking better; but even there the prospect is not encouraging. The same may be said of the nurseries and market gardens around London, which have suffered much from the ungenial weather and high winds. There was a good prospect for fruit, but the late cold and storms were thought to have been injurious.

Last Wednesday I went to the Crystal Palace, where the charity children connected with the church in London assembled, instead of at St. Paul's Cathedral, as has been the custom for a great many years. The great Handel Orchestra was filled with some four thousand children, dressed in the Sunday costumes of their respective schools. The arranging of the children, and their various quaint costumes had a very imposing effect, which was heightened to a degree which no words can describe when they set up to sing, accompanied by the magnificent organ, with an audience in front of near thirty thousand elegantly dressed persons, of both sexes. A scene like this once witnessed will be remembered with pleasure as long as the mind endures. After singing some half dozen pieces of sacred music, the performance concluded with the national anthem, which was sung with great effect, and the scholars betook themselves to various games in the extensive and beautiful grounds which surround this magnificent, and I need not say, unearthly structure.

In coming up from Manchester to London a gentleman happened to be in the railway carriage with me who was going to the colony of Natal in Africa. There were two other passengers, one a magistrate of the County of Lin-

coln, and the other I understood was a barrister. The question soon arose relative to the comparative advantages of our different colonies as emigration fields; and a sort of discussion, in a conversational style, was kept up for upwards of an hour and a half. I had of course to set forth and defend the claims of Canada, about which in two or three points my opponents evinced a lamentable want of correct information. Having set them right, I gave them some of the pamphlets with which I had been furnished by Mr. Hutton, of the Bureau of Agriculture, which I find very convenient and useful, particularly in my intercourse with the people of the agricultural districts.

I purpose being in Paris the end of the week, to attend the National Agricultural Exhibition of France, on which I hope to send you some hasty notes in my next. G. B.

Grape Culture in Canada.

We copy from Mr. Hutton's Report of the Bureau of Agriculture, the chief part of a highly interesting correspondence on the subject of the practicability of successfully cultivating the grape in this country, for the purpose of wine-making. We cannot help thinking that Mr. De Courtenay is somewhat too sanguine in his estimate of the adaptation of the climate of Canada for this purpose. Experience has shown that there is something peculiar in the American climate in regard to grape cultivation. In cases where from careful observation and comparisons, there was thought to be good reason for anticipating full success in the culture of the European vine, actual trials have been only followed by disappointments. There has been some influence or other preventing the vine from adapting itself to situations on this continent which seemed on a cursory view entirely suited to it, that the most experienced cultivators could not fully understand. But the subject is one well deserving attention. Although the European vine may not succeed, there is no difficulty in favorable situations with varieties of the native grape. Whether a good article of wine can be produced, however, in such quantities, and over such considerable areas of country as to make the product one of commercial importance, has yet got to be shown. There can be no doubt of the truth of Mr. De Courtenay's remark, in which Professor Hincks quite agrees with him, that if Canada could become known as a wine-producing country, the effect in creating a favor-

able opinion abroad of our climate and resources would be greater than that of almost any other fact that we could establish. Mr. De Courtenay has also a correspondence with Mr. Hutton and Professor Hincks, on the producing of silk. He is of opinion that the leaves of the common bass wood would answer admirably to feed the silk worm, and he does not consider the climate unsuitable to the business. We have not space for the correspondence on this subject, but we make the following extract from a letter dated October 27, 1859, which is to some extent a summary of Mr. De Courtenay's views in regard to the climatic points of the question, both in reference to silk and wine:

"Theorists and Botanical Professors declare that the long and harsh winters of this country would render the production of Silk or Wine impossible.

Allow me positively to declare, as a practical man, that the length and severity of the Winter has nothing whatever to do with the production of either Silk or Wine.

Two thousand six hundred degrees (centigrade) of Summer heat is required for the successful and economical production of Wine, Silk, Indian Corn, and Hemp.

This part of the country produces Indian Corn in abundance.

Belgium produces Silk and Wine, and cannot produce Indian Corn.

It is further my opinion that the Winter here is neither as long or as severe (for all practical purposes) as that of Northern Italy, where Silk and Wine are grown in abundance. I have lived there for many years, and have always had from fifty to one hundred head of horned cattle, which I have been ever obliged to keep constantly housed from the fifteenth of October to the fifteenth of May.

Here, my cattle are now in their pastures, and will certainly return there before the first of May.

VAL DE COURTENAY,
Bury, 3rd August, 1859.

TO THE HON. THE MINISTER OF FINANCE:

SIR:—Circumstances have lately come to my knowledge that convince me of the certainty of being able to establish vineyards on the hilly parts of this district, having a rocky, gravelly and sandy soil, and of a Southern or Western aspect.

The Blue-Berry buds forth about a month before the Grape, and notwithstanding the growth being in frosty situations, it is as often as free from Spring frosts in this country as in Northern Italy and Switzerland.

I have, within the last week, observed blueberries situated at the base of a hill of mine, having a Southern aspect, and they are in a

prosperous condition, notwithstanding the late frosts of this year.

It is an admitted fact that vines do not suffer from the most severe winter frosts when they are pruned low. The Crimea is a proof of the axiom—as is also Neufchatel in Switzerland, remarkable for its wines, and where the climate is much less favorable than here.

Judging from the period of the budding of the blue-berry, the grapes would, in fair situations, have here nothing to fear from the late Spring frosts, and autumn frosts are beneficial to the wine grape, and I consider them absolutely necessary to the production of good wines.

I forward the following opinion obtained from Messrs. Foigneux et Moreau, the best authorities of Northern wine-growers:

"1. Where the culture of Maize cannot be carried on, that of the vine must cease also; when the one does not ripen the ear, the other will not ripen its fruit.

2. Where kidney beans (haricots) will not ripen their grains, you will have much difficulty in obtaining the grape.

3. Finally, the vine planted in clay soil, or moist land, is exposed to the late frosts, and will give you much acid, and little sugar, and little sugar, then alcohol, since it is the one which makes the other, and if alcohol, then the richness and keeping quality of the wines. According to this, the following are the principal considerations which must govern you:

1. That it be suited with the proper sort of soil where it should be cultivated.

2. That the vegetation may be late in spring, so that it may more easily escape the disastrous action of the spring frosts, which cause the extensive destruction in the vineyards.

However, it is less the effect of the frost, than that of the burning sun which succeeds, which produces this result—therefore, if we cannot we should so manage that the vines may escape the immediate action of the morning sun; in the contrary case, there happens to the frozen buds what happens to all delicate vegetation which passes suddenly from a state of excessive refrigeration to an elevated temperature.

Consequently, we should choose an exposure towards the South or West in localities exposed to spring frosts, so that the sun may not strike the buds till after the frost has disappeared.

From the above, and from many other reasons, I am convinced that I could produce excellent wine in this country, and I have a good hill of a Southern aspect of nearly 300 acres in extent, and of sufficient declivity to increase considerably the natural heat of the country. I also consider the Eastern Townships of the part of the Canadas peculiarly adapted for a wine country. The West does not sufficiently preserve the covering of snow through the winter, and the early springs expose the grapes to white frosts. The advantages of securing a successful culture of the grape are manifold.

If this country had its plains covered with sheep, and its hills with vines, it would be the Switzerland of America, and by taking from it those ideas of bleakness and excessive cold ever associated with Canada in the minds of Europeans, it would quickly induce an increasing emigration, and draw towards it that capital and intelligence which are necessary to render the country prosperous.

Further, in the point of view of the political economist, it would be equally advantageous.

It would furnish all Canada with wines suited to the wants of every class, and the effect of wine cannot be better demonstrated than by the fact that in wine countries there has never been found a necessity for Temperance Societies, and the most barren hills become the most productive and most nourishing part of a country; for wine is nourishing, and every bottle of it used in a family will save a pound of bread or a pound of meat, and this I have proved myself, as I, at the time in Italy, had two hundred (200) laborers in my service, and I supplied them with wine for their meals from economy.

In the year 1800 the Emperor Napoleon appointed a Commission to inquire into the causes of the poverty of the Province of Brittany. It reported that the use of whiskey was the cause, the inland duties then existing preventing the use of wine in that Province, and the extreme distilleries preventing the growth of wine. The excise duties were immediately done away with, and that Province became one of the most flourishing in France, and drunkenness became unknown there.

At a later period the Belgian Government induced the cultivation of wine in order to prevent this vice, and fully succeeded, and Belgium now competes successfully with Champagne for sparkling wines, which are found to become superior as they draw closer to the Northern limits of the wine-region.

The preparation of the soil, the importation of the cuttings required for the first 10 acres (about 50,000) from Neufchatel, and the other expenses attendant on a new enterprise, would be difficult for me to support.

To carry it on on a smaller scale than 10 acres (a quantity one man can take care of) would almost the same expense and would demonstrate no positive result.

Here Mr. Courtenay stipulates for certain encouragement from Government, in case of success,—and thus proceeds:—

I would engage:—1st. To prepare and plant in the spring a good Vineyard of Ten Acres, which in 3 years would produce 2,000 Bottles of good Wine, and 1,000 Bottles of inferior Wine of the Acre, and, within five years, would produce nearly double the quantity, besides some ready.

2d. I would engage in Ten years to prepare a Vineyard of 100 Acres, producing at least 20,000 Bottles of excellent Wines, Red, White

and Sparkling, and at least 100,000 Bottles of inferior Wine.

I would require no grant or remuneration of any kind, before I fulfilled to the letter, the first part of my engagement, when if the Wine was found to be of inferior quality or quantity to the engagement, I should have no claim either to the Grant or to any other remuneration.

If, on the contrary, it was found at the end of three years, that I produced 20,000 bottles of superior Wine, I shall then obtain the encouragement in question, on the condition of fulfilling within the given time the second part of my obligation.

I have twenty years' experience in Grape cultivation. I have a man who has this 20 years been always employed in cultivating the Vine on the Northern limits of Italy, and as high as it would grow on the Alps. His experience and my own, I think, cannot fail to be correct.

I have, &c.,

W. DE COURTENAY.

On the receipt of the above letter, it was submitted to Professor Hincks, for his opinion, and also to Mr. Henry Parker, of Cooksville. The following are their replies:—

To William Hutton, Esq.,

Secretary.

Bureau of Agriculture & Statistics,
Quebec.

Toronto, Sept. 24, 1859.

My Dear Sir,—I have carefully considered Mr. De Courtenay's paper respecting Vine culture in Canada. He evidently understands the subject practically, and has referred also to good authorities. I must say, however, that I doubt the growth of Maize being any test of a climate suiting the Vine, and although further experiments may be desirable, I incline to the opinion that the true Vine (*vitis vinifera*) does not come to perfection without the glass in this climate, and that our chance of successful Grape culture lies in choosing good varieties from our native species.

The Ohio Vine cultivators, in what would seem a more favorable climate than ours, thought themselves obliged to adopt this plan. (I am not aware of the extent of their experimental trials, but they were experienced German cultivators, and would no doubt have employed the European Grape, if possible,) and I should recommend at least careful trial before any quantity of European plants is procured. It is quite possible that the hardier kinds derived from American stocks might answer and yield good Vine when the European species would fail.

Mr. De Courtenay asks Government encouragement for his enterprise, but he seeks this only in case of success, and undertakes the risk himself. The doubts I venture to suggest do not, therefore, materially affect the case. They may deserve his attention if his experience has hitherto been European, but if he can succeed in

introducing Wine-making as an additional branch of Canadian industry, I should think he would be a public benefactor, and I see no improbability of its being done with American Vines, though I fear the length of our Winter not leaving sufficient time for the European Grape to come to perfection.

I believe that the Ohio Vineyards already produce a good article, and are improving from year to year.

Believe me, &c.,

WILLIAM HINCKS.

P.S. Mr. De C. refers to the Blue-Berry, but he should observe that it is not the same species as the European, and is of course one adapted specially to our climate.

To William Hutton, Esq., &c.,
Quebec.

Clair House,

Cooksville, Sep. 30, 1859.

Sir,—Absence from home prevented my replying to your letter, dated Sept. 20.

It gives me the greatest pleasure to coincide with Mr. De Courtenay in many respects, as regards the cultivation of Vineyards. I cannot of course, speak with certainty of the Lower Province, but I consider it a matter of vital importance to Upper Canada.

I have proved, beyond a doubt, that immense crops of grapes can be raised without the necessity of either burying them, as in the Crimea, or pruning low, as recommended by Mr. De Courtenay.

Last year I cut several tons off a few acres, selling some ripe, turning some of the Green Grapes into Champagne, and also making some Red Champagne, as well as some Dry Sherry. I sold 100 gallons of Champagne to one person, who speaks highly of it, and I bottled a cask for home consumption, which is universally liked.

I am strongly of opinion that age will greatly improve the fabric, from the fact that a few bottles remaining from my first Vintage are now far superior, and evidently still improving.

My plan of action is this: I strike any quantity of cuttings, a foot apart, and six inches in the rows: these remain two years, requiring little trouble to keep them free from weeds. In the meantime I trench and underdrain the ground. This done, I take the two year old plants and plant them out Spring or Autumn, encouraging their growth by frequent tillage, and the following year I receive a small return.

If large crops be required, it is necessary to be particular about the under-draining, and for the vineyard to be permanent to trench the ground, making use of whole bones, except the land be pure sand, when trenching may be dispensed with.

I have many vines growing over wire trellises, formed like the roof of a house, others simply tied to stakes. I have much larger crops from the wire trellises, but the expense of erection,

and growth of grass and weeds under them would prevent my making use of them on a larger scale. The spring frost has never injured my vines till this year, when that of the 4th June cut off my entire crop, leaving, however, the vines uninjured. The white frost in the Autumn certainly improves the grapes, but I have proved that one severe enough to cut off the leaves injures the fruit.

I am of opinion that cuttings procured from abroad would certainly fail, from their requiring to be buried in the Winter, thus causing a large amount of labour, and injuring the vineyard. On the other hand, the native grape, the Clinton, has stood the test of the hardest Winters unharmed, while the Black Hamburg, Black Chester, Sweet Water, Isabella, Catawba and Royal Muscadine have been all killed to the ground. The Clinton, with sugar, makes a splendid wine. The resources of Canada can never be developed unless such men as Mr. De Courtenay meet with every encouragement. His engagement is very fair but difficult. Canada covered with vines would be very different from Canada as it now is; and how many men have had grants of land, on which nothing has been done but felling the timber and planting potatoes.

I have tried everything in my power to spread the vine culture, but without sufficient means what can I do single-handed? I have given away plants, and tried to impress upon numbers the great advantage accruing to themselves and the country from Grape culture, but they will incur the first necessary expense, and they also have a fear of the want of a market. Let the engine, however, be once set in motion, and there can be no doubt of the country being soon covered with a splendid article of commerce.

The interest I feel in the matter must be an apology for the length of this letter.

I am, Sir,

Your Obedient Servant

HENRY PARKER

On sending a copy of Mr. Parker's letter to Professor Hincks and Mr. De Courtenay, the following replies were received:—

University College,

Toronto, October 7, 1859.

To W. Hutton, Esq.,
Quebec.

My Dear Sir,—I am much obliged to you for the copy of Mr. Parker's letter, and am glad to find that an intelligent man, of considerable practical experience, confirms my view as to the culture of the Vine. The Clinton Vine, which he thinks hardiest of all that are useful, is one of the varieties from the native species. It is probable, however, that with the system of pruning the Catawba and Isabella Grapes, of native origin, and which are so much cultivated in Ohio, would flourish and yield valuable produce; but Mr. Parker confirms my view that trying the European Grapes in this climate would be useless.

Undoubtedly Grape culture is a desirable branch of industry to introduce, and successful enterprise in it deserves encouragement. I only desire that Mr. De Courtenay should not, through over confidence, run into expenditure in procuring European Vines at the great risk of disappointment. I would try some of the European with the short pruning. I would also try the principal American varieties, and increase most the stock of the kind which answers best, and in this way little time need be lost. It would be well worth while to make immediately a plantation of the Clinton Vine, as it may be accounted that it will succeed certain and yield a good wine. If Catawba and Isabella, and other finer American varieties succeed, they may deserve preference on further planting, and if European varieties succeed, they may be better still, but of them I cannot help entertaining great doubts.

I will endeavour, at a suitable season, if I live, to visit Mr. Parker's Vineyard.

Believe me, &c.,
WILLIAM HINCKS.

Val de Courtenay,
Bury, October 8, 1859.

To Wm. Hutton, Esq., &c.

My Dear Sir,—I have just received your favour of the 4th instant, and am indeed grateful to you for the copy of Mr. Parker's most interesting communication. The information he gives as to the Clinton Grape is most important. I was aware that the most part of the other grapes he mentions could not succeed; but there are two kinds of Burgundy Grapes grown in Belgium that I am certain would answer, by being grafted on the Clinton in the way I mention—"Griffe en fente Couture."

I have no objection to your making what use you please of my letters, and, again thanking you for the interest and kindness you have shown

I remain,
W. DECOURTENAY.

P.S. I forgot to say that I think Mr. Parker's plan of transplanting Vines is a bad one, nor do I admit that good wine can ever be grown on any other soil than a sandy or gravelly one. The art of producing good wine is in the grafting and pruning, and if you think Mr. Parker would not think it a liberty, I would address him in detail on the subject of his able letter.

Cheviot Sheep.

An esteemed correspondent has sent us the following notice of this valuable breed of sheep, in a paper lately read at a meeting of the Newcastle Farmer's Club, England, by Mr. Jos. Lawson, of Longhurst Grange. Our correspondent is of opinion, in which we quite agree with him, that "although the rage at present is

for large sheep, yet the Cheviots, from their hardiness, and their excellent wool, might be very suitable for the higher and colder parts of our Province."

The first direct mention of Cheviot sheep occurs in 1372, when large tracts of the Cheviot hills are described as covered with a small, but very hardy race of sheep; and in 1792 they are noted as being without horns, of open countenance, lively eyes, long bodies, thin in chine and breast, clean and fine-boned legs, and yielding fleeces varying in weight from 2½ lb. to 3½ lb. Snow storms often perilled all the sheep on the Cheviot range of pastures; one storm is reported as having caused a loss of 90 per cent. on many farms; another noted as the 13 days' drift, swept away 75 per cent., and no hill farmer of 1794 will ever forget the drifty Saturday. The Cheviot race of sheep, in a national point of view, exceed all other breeds in economical importance, for there is no ground to believe that any other race of sheep known would yield as valuable an amount of produce on the Cheviot range of pasture. In no other country are such stormy hill pastures stocked with sheep in winter; and our naturalists assert that no wild sheep known could exist if exposed to similar inclemencies as the Cheviot sheep will bear with complacency; they possess the necessary requisites of hardness and activity, and grow heavy fleeces of a fine close fibre, equally efficacious in resisting cold and rain. They combine all the independence of a mountain race, with much of the docility and grazing qualities of the low-ground races; they form the connecting link between our greatest altitudes and our low pastures, easily adapting themselves to either, and have always formed an attractive stock for annually supplying our richest grazing pastures. They evince great attachment to the locality in which they are reared, and, when the ground is covered with snow, they are indefatigable in scraping to the grass or heath; they are often buried under the snow without sustaining any serious injury; and one case is on record of one being under snow 33 days, and, although unable to move when discovered, it survived and recovered its strength. They possess great powers of adaptation, and two or three generations suffice to acclimate them to almost any extreme of temperature, altitude, or humidity. The principal point in breeding is to produce such a type of stock as is most suitable to the climate and herbage, and it is imperatively necessary to have sheep fully equal to the severities of the climate, and of at least equal hardiness to their pasturage; and, where a breeder keeps these points steadily in view, and avoids any impurity of blood, I mean that serious deterioration will not assail such flocks. An ordinary Cheviot ram should have his fore and hind quarters of equal weight; fillets, haunches, and cisis wide; ribs springing horizontally from back and falling deep down at sides; shoulders well slanted, free in motion, fine at top, and rising about half an inch higher

than the back; neck springing up from shoulders and fully incorporated with their rise; head easily set on, level on crown, and covered with hair; ears rather pointed forward, well closed, thin, free from redness, and well crowned with fine hair; they should be about four inches long and not more than five inches apart, any tendency to flatness or to droop being very objectionable. Eyes large and mild, but full of life; eyebrows very slightly elevated, and about five inches across; nostril bone strong, with an elevated ridge; the nostrils being black, full, and square with muzzle; cheeks fine, and covered with fine hair, of an equal length; under jaws about nineteen inches long, clean, well spread, free from loose flesh underneath, with the front projecting something like a chin; lips full and swelling from jaws; the muscles should quickly expand from the head to the shoulders and breast; bosom to project before shoulders, with brisket broad and deep; fore legs fine between knee and ankle, ankles clean, and hoofs black. He should be straight from the shoulders to the tail, which should hang down perpendicularly, and be flat in appearance; long from haunch to cist; flanks well down; thighs deep, short twist, with finely-turned hocks, slightly projecting; hind legs should have clean muscles and be free from coarse hair, they should be flat in appearance, and stand as near perpendicular as possible. Wool should be quite free from hair, and uniform in quality: except a little coarse on the hips and tail; its lineaments should be soft, long, and tenuous, each filament being thickly set with small fibres; it should come up to the ears, extend one inch on the jaws, hang over the knees, and leave no bare flanks visible. An ordinary ram should be strong in all his points, but equally free from coarseness or fineness, and should stand about seven hands high. Cheviot sheep are reared on hill pastures through a regular rotation of classes and ages, and then sold to those whose pasturage enables them to complete them for the shambles, and much discernment is exercised by the skilful grazer in selecting stock from a hill most suitable for his pasturage. Mountain sheep reared on heath and bent do not suit low pastures with rich, broad grasses as well as similar sheep from a mountain pasture of broad grasses; and sheep from a hill of this latter description would disappoint a grazer, if put on a low pasturage where the grasses are short and fine. The prices of top wether lambs, during the last 30 years, have ranged from 6s. to 15s., exhibiting an average of 9s. 6d. each. Draft ewes, during the same period have varied from 12s. to 28s., averaging about 19s. 6d. per head; wool always forms a large item in the produce of a Cheviot stock. Their wool appears to have been produced by a sedulous cultivation persevered in over many centuries; the highest attainment being a long, fine filament, thickly set, closely serrated, and a total freedom from either long or short hair. Wool is a slow conductor of heat, and the more nu-

merous the serrations on each filament, the more effectually can it resist cold, wind, and rain; and it is to the possession of these qualities, in a superior degree, that pure-bred Cheviot sheep evince their superior hardiness over every other race of sheep known. A regular Cheviot should yield an average of 3 lb. to 4 lb. of fleeces of white-washed wool, the price of which has varied from 8d. to 21d. per lb. during the last 30 years, and has averaged about 13½d. per lb.

THE WISCONSIN AGRICULTURAL AND MECHANICAL ASSOCIATION.—This newly organized institution is to hold its annual fairs at the place known as the Cold Springs, two miles west of Milwaukee. It is based upon the same plan as that which has been so successful at St. Louis. Its objects, as defined in the charters, are to promote improvements in all the various departments of agriculture, including not only the great staples of industry and trade, but also fruits, vegetables, and ornamental gardening; the promotion of the mechanic arts in all the various branches; the improvement of the rearing of all useful animals; the general advancement of rural economy and household manufactures; and the dissemination of useful knowledge upon those subjects.

For the accomplishment of these objects various means will be adopted, besides the annual fairs. The grounds are to be highly ornamented, so as to become a favorite place of resort; a museum in which to display all articles of use; and a library to contain books appropriate to the subjects indicated; a series of lectures will be instituted. From the spirit with which our business men already subscribed by 17 persons, we have no doubt the project will be successful.

The officers are Dr. E. B. Wolcott, President; I. A. Lapham, Secretary; Harrison Ludington, Treasurer. To Hon. W. D. McIndoe is due the chief credit of initiating this important movement.—*Milwaukee Sentinel.*

THE GREAT TORNADO.—From a variety of accounts published in Western papers, relative to the late tornado, it appears that it swept over a space of 450 miles, with undiminished force. Its destructive effects can scarcely be conceived from the accounts given. A Chicago paper says whole forests were crushed in an instant and respectable streams of water literally scooped out by the mighty tempest. The course of the tornado is traced from Fort Dodge, Iowa, where it commenced on Sunday morning, July 3rd, to Ottawa county, Michigan, which it reached on the evening of the same day. Lyons (Iowa) Union gives a long list of killed and wounded. Probably not less than 1500 lives were lost, and thousands are left houseless and penniless. Liberal relief measures are in fact at Chicago and other places.

Winter Barley.

The following is the communication of Mr. Chapman, of Ottawa, to the Bureau of Agriculture, referred to in a recent number, on this subject:

My attention was drawn to a remarkable plant of Barley (a single one) growing in a Cottage Garden in England, in the Autumn of 1851, and I brought it with me to Canada in the Fall of that year. The amount of ear in that plant was 56, and on examination they proved to be 5 rowed, very strong in the straw, and averaged nearly 70 grains each. In the Spring 1852, I sowed a part of it, and although it produced an unprecedented amount of fodder, it never brought an ear. In the Fall of the same year I sowed some more, and was much gratified to find in the Spring a fine healthy crop, and on July 11th it was ripe, and cut, and as good in quality as the parent plant. Since then I have been trying it in all the forms that suggested themselves to me—as to its hardiness—the best time for sowing it—the proper quantity of seed—soil best adapted to it—and whether it varied in its habit of soil or productiveness—each year sowing being of the previous year's yield. And during all that time it never failed once when sown on land fitting for it, and at the proper time; but when sown late on sand or where water laid on it in the Spring, it has been killed, but when sown on pretty stiff land, well tilled, in fact as it should be for Fall Wheat, any time from the middle of August until about the 10th September, the Winter has never injured it, and it retained all the characteristics of the first plant. It ripens ten days in advance of Fall Wheat, and its vigour of growth is wonderful, for from its manner of stooling, the average of ears from each plant is not less than 50, containing at least 60 grains; a far greater number being produced where the plants had more room. I have until this fall sown it in drills 15 inches apart, and the seeds 3 inches in the drills; but this year I have sown some at 10, 12 and 15 inches, with the seeds 3 inches as before, which will enable me to ascertain if an increase of seed produces an increase of yield. I commenced to sow on the 9th of August and continued at frequent intervals until the 9th September. By adopting the last mentioned distances, the exact amount sown was 6 lbs. to the acre, or rather less than a gallon.

I shall here inform you that I am not a Farmer, but a Gardener, and the quantities grown have been merely experimental, and I can therefore only give you the proportionate yield per acre, which I find on ordinary Wheat Land to be a minimum of 60

with a maximum exceeding 80. Grass has never been tried with it, but as it is sown so thin upon the land, it appears to me likely that it would be sufficiently strong to escape being smothered by the luxuriant growth of the other; for on the 6th October the growth of that sown on the 9th of August was as level as a piece of baize, 15 inches thick, of which I sent specimens, taken from the middle of the land, to Professor Buckland, at that date. The straw is fully proportioned to the weight of the ears, and I have never seen it laid. The fodder is of the best description; the sample I send you is not an average one, as there are a few scattering ears, the crop being thrashed in the Fall, but they may serve to guide your judgment of its properties. It is proved to be of first quality for mowing, and it has another excellent property to which I beg to draw your attention. It has a most remarkable thin skin and a rice shaped grain, which will greatly increase its value to those who manipulate it into pot and pearl barley. A gentleman largely engaged in that manufacture, pointed out to me the advantage from the improved appearance of the article, by leaving it when manufactured nearly as long as an ordinary grain in its natural state, which would in all probability induce a very extensive business. Since I have grown it, I have not seen a single plant, ear or grain injured by any insect or blight, and so far as my observation goes, it is the safest and the most profitable grain crop that can be grown in Canada, within, of course, certain limits. I mean that every prudent Farmer should grow it where the Wheat crop is so uncertain. The effect it might have, if grown for one season over a large contiguous area, in arresting the Wheat Fly, every intelligent Farmer will form his opinion upon. Some persons have raised an objection to drilling it, as being costly both in time and money. The method I adopted was this. I took a piece of wood about 6 feet long, 6 inches wide, 2 inches thick, and bored that with an auger at 10, 12 and 15 inches distance, into which I put as many pins as the distances gave me, the narrowest being 7, to this I put a pair of train shafts and a pair of handles, and a couple of pins through the three where they intersected, and the whole affair was done. With a boy to lead the horse and a man to hold the drill, it is surprising how soon and how easily an acre may be marked out. One of the barrow shaped sowing machines may then be used, and a man can go over an acre with ease to himself in 4 hours and deposit the grain with almost mathematical precision. The cost of such a machine is \$4, and can be used for all root crops by merely setting the distributor according to

circumstances. The increased expense of sowing in drills over broadcast is not so great as it would appear. But there is no reason why it should not be sown broadcast as well as any variety where two bushels are sown. It is only necessary to mix your 6 lbs of grain with ashes or any other substance like it, and it can be scattered as well as if it was all grain, with the full knowledge that you have saved nearly two bushels of Grain for every acre sown, and that you may get it into your barn, a very heavy crop, before your Wheat calls for your attention; and if you wish, you may get a good crop of White Turnips to follow the same season, to the manifest advantage of your live stock, if it is not sown with grass. It was not my intention to have sold any this season, but all parties who had seen it growing became impatient that it should be let out, or they declared that they would steal it. I therefore exhibited it at Kingston last Fall, and intend to sell it to the general public. For the reason I have given you, that it has only been grown up to this time experimentally, I have no very large supply, and as one gallon is sufficient to sow an acre, I propose to charge \$2 for that quantity, which will be a trifle in advance of the commonest articles at two bushels per acre, and would produce sufficient to sow a very large area the next year.

I will deliver it free to the Ottawa and Prescott Railway, and I intend to give ample notice through the press next summer, when it will be ready, so that all who are interested in it may come and see it, and judge for themselves.

CHAS. CHAPMAN.

[Since the above was in type we have received from Mr. Chapman two specimens of the winter barley, sown at Ottawa, 1st September, and taken up from there on the 12th June. They were remarkably strong and vigorous plants, one stool containing about 40 stems, with from 60 to 70 grains in each ear, each stool being the growth from a single seed. This would represent a rate of increase of about 2500 from one. This extreme tillering must of course be attributed largely to the mode of sowing and cultivation, but the plant is evidently very vigorous and hardy. Mr. Chapman appears to be of the opinion that this is a peculiar variety of winter barley. If this is really the case, it ought to be propagated, but if it is only the ordinary sort, it is already sown in large quantities in the Niagara District and other parts of Canada,

and in the Western States. We believe it has been found very prolific, wherever properly sown and cultivated.—Ed.]

The Pleuro Pneumonia in Africa.

This disease has been very malignant in South Africa. The Rev. Mr. Lindley, a missionary recently returned from the Zoloo country, South Africa, a week or two ago at New Haven, gave the following account of it, reported in the *Homestead*.

"The disease was introduced five years ago from Holland, and in two years spread *thirteen hundred miles* up the coast and into the interior, literally blotting out the neat stock of the country. A great portion of the wealth of the natives and of the Dutch farmers who are scattered through that entire region consists in cattle. They are fed in droves and accompanied by herdsmen. There are no fences. Trading in cattle is very extensively carried on, and they are used as draught animals very much.

A full blood Dutch bull was imported for the improvement of the native stock, by a gentleman of Cape Town. This bull had the disease, and after infecting several herds, living a few months or weeks, he coughed painfully, his lungs decayed and he died.

In general the symptoms of the malady are, after some eight weeks have elapsed since the exposure—first, a staring coat, then a light lung cough followed next by a deep consumptive cough, given with the neck outstretched so as to make a straight passage from the lungs outward; shortly after this they stop feeding, fall, and die.

The spread was very rapid. Unprincipled men would sell their diseased stock, in some cases driving it far into uninfected regions; thus it traversed 1,300 miles in two years, destroying hundreds of thousands of cattle.

The question was asked what is the state of the cattle that was left, or passed over?—Mr. Lindley said there are none, they are all swept away. He said he had known of one animal to get well and heard of others in a few cases, but literally they were all cleared out.

As the disease approached the district where he lived, at once it 'jumped' two hundred miles or more, being thus brought within sixty miles of his people. This was done by two native cattle traders, who bought five head of diseased stock and drove them two hundred miles and then mixed them with a herd of eighty or more.

Mr. Lindley became thoroughly alarmed at the approach of the malady, and as the chief was holding at that very time a counsel of his people, he (Mr. Lindley) went before them and fully explained to them the contagious nature of the disease and how they might guard against it, and so alarmed them, that with the aid of the chief's authority, they at once cut off all communication between their own and the neat cattle outside their bounds.

The people inhabit a valley and the sides of the surrounding hills. From his description we should judge it to be quite thickly settled, by a comparatively civilized people.

The disease soon appeared on their bounds, but as all were prevented bringing cattle over the ridges of the hills and other bounds of the district, they enjoyed entire freedom from it among their cattle, while within sight the cattle of the neighboring region could be seen at times lying dead in the fields.

Mr. Lindley remained after this three years in that country, and during this time and afterwards, so far as he knows, the same entire exemption was maintained. Sometimes the natives would be obliged to turn out armed with spears, etc., to drive back those who were determined to bring their cattle into the valley.

Mr. Lindley described a process of inoculation by which the disease was implanted in the tail of sound animals, and in many cases so affected their systems that they would after recovery be no more liable to take it in the lungs. This is done by making an incision in the animal's tail, and inserting a portion of a diseased lung. The tail swells up, and the disease goes up the tail to the body, and the hinder parts swell and become most disgusting. The sores need opening, and the animal careful nursing. They generally lose their tails, and have a terrible time of it. The number that recover is about 16 out of 20, if the animals are young or vigorous, healthy, and in low flesh. The inoculation is certain death to fat cattle, and cows in full milk or with calf. It is now a matter of speculation to go into regions not yet affected and buy up the most promising animals, inoculate them, and then drive them into the cattleless region for sale. These are the only cattle they now have, but they are perfectly unharmed where the disease is all about them."

We have given a large amount of space in our recent numbers to this subject, but trust that its importance will be considered a sufficient reason for so doing.

Pleuro-Pneumonia.

We learn from the *Albany Country Gentleman* that pleuro-pneumonia was introduced last May into the State of Massachusetts by the importation of cattle from Holland. The statement given is very decided evidence that the disease is contagious. This evidence is so minute that it will satisfy most persons who have not committed themselves to the non-contagious theory. Those who have bestowed the most attention on the disease, are generally of the opinion that the disease is contagious, but that it also occurs spontaneously, the result generally of conditions very unfavorable for maintaining the health of the animals. The opinion that pleuro-pneumonia is not contagious, which opinion has been urged by some veterinarians and others in this country, has been the chief cause of the British Government not adopting the course followed in several Continental States of taking measures to prevent the spread of the disease—this by slaughtering all animals laboring under the disease, and indemnifying their owners in whole or in part. In certain States, as Belgium, this measure, it is said, has almost wholly eradicated pleuro-pneumonia, and when it has reappeared, it has been traced to animals brought from other countries.

Whether a similar course should not be adopted in this country, is a question which is fairly open to discussion; and we consider that agriculturists should consider the question with a view of legislative interference—especially as to the importation of cattle. No doubt such a proposition would be looked upon as interfering with the principles of free trade; but as almost all the cattle imported are slaughtered within a few days of their being landed, the prevention of the importation of cattle would not affect the supplies of animal food. Few graziers will now purchase foreign cattle, as the result of almost all experiments has been that the animals seldom continued long healthy, and there have been instances of a very large percentage dying of pleuro-pneumonia. The remaining animals in the fields have generally been sent to market—the owners expecting that the disease would extend, the result of which would be a higher percentage of deaths. There are Government inspectors at the London Wharfs, and doubtless at the principal ports in England, who pronounce upon the cattle imported, whether they are or are not laboring under disease. Many persons will regard this inspection as comparatively useless, as during the first stages of pleuro-pneumonia it requires the utmost skill to distinguish whether the animals are laboring under that disease or from weakness

induced by the hardships they have undergone during the voyage. The treatment to which cattle are usually subjected on board of the steamships plying between the Continental ports and London, predisposes animals to disease. It may also be inferred that when pleuro-pneumonia appears in a herd of cattle, whether grazing in the meadows of Holland, or being fattened at the distilleries, the disposing of the animals immediately occurs to the owner, and London is the most convenient port to which they may be despatched. We entertain no doubt that a considerable number of the animals which come from Holland and the Baltic ports are from herds in which the disease has appeared. Those cattle which we have seen landed at the wharfs or passing through the streets of London, have suggested this impression.

Were the importation of cattle prohibited, those which at present are sent alive to the London market would be slaughtered on the Continent, and the carcases forwarded to London. This would cause no diminution of the supplies of beef, while it would secure a certain immunity from the spread of pleuro-pneumonia. The importation of live sheep is also a question which may be considered. The disease known as small pox is not now known in this country, but was introduced from the Continent shortly after the free tariff, and caused very considerable loss to some graziers. A legislative enactment was consequently passed against the sale in public markets of animals laboring under infectious diseases. This Act is still in force, but is rarely called into operation. Were it more strictly enforced, the owners of animals affected with pleuro-pneumonia would be compelled to slaughter at home animals laboring under disease, in place of despatching them to market, as is at present generally practised. Were this course adopted, pleuro-pneumonia would be of less frequent occurrence, and it might in time render unnecessary such a stringent measure as the slaughtering of all animals laboring under the disease, it being very probable that the disease would thus become very rare. Pleuro-pneumonia is comparatively of recent introduction, and although its introduction cannot be very well traced to this country, there have been statements published which at least is indirect evidence that it was introduced from Holland, first appearing in Ireland, and believed to be introduced into the west of England by diseased animals coming from Ireland. There are very few practical men who do not believe that the disease is contagious, and who generally satisfy themselves that when the disease does appear in their stock, it is to be traced to some recent purchases in market, or by their animals

having come in contact with affected animals, or from substances, such as straw, which have been in contact with diseased animals. The disease has been for some time prevalent, as has also the disease known as mouth-and-foot disease.

In several English counties—especially those around London, and in the counties of Derby and Chester, the disease has been very prevalent during winter and spring. It is also prevalent in dairies in the Lothians, more particularly the dairies in Edinburgh.—The stock affected are principally cows, which have always been more subject to pleuro-pneumonia than other cattle.

In reference to the introduction of the disease into America, it is seldom that such direct and conclusive evidence as to the contagious character of pleuro-pneumonia has been presented, as is furnished in its introduction into the State of Massachusetts. Had the British Government been equally prompt on the first appearance of the disease in this country, it may be safely inferred that its spread would have been greatly checked, or perhaps wholly prevented. One of the great disadvantages which the agriculture of this country labors under, is the absence of its recognition in the Ministry, either by a Minister of Agriculture as in France, or by a Board of Agriculture, which at one time existed in this country, and which has been copied by several of the American States. In Canada there are both a Board and a Minister of Agriculture. With a Board of Agriculture, or with a Minister of Agriculture in this country, such questions as the introduction and spread of infectious diseases would receive prompt attention, and action be immediately taken if deemed necessary.—*North British Agriculturist, (Edinburgh.)*

Wine Farming.

In the Valley of the Ohio, the average yield from vineyards for the last twelve years, has been about 200 gallons to the acre of 2,400 vines. In well cultivated vineyards, favorably situated, 300 gallons.

This is about the average of France and Germany.

Wine Farming will, in a few years, become simplified, and almost as easily understood as corn planting. There is no mystery in it. Experience alone must teach the proper position and soil; the right distance apart for the vines; the most judicious methods of Spring and Summer pruning; and as for cultivation, keep the ground clean with the plow or cultivator, like corn. Certain rules are given in books, for vineyard culture, as pursued in

the Ohio Valley. These are the European systems, adapted to our own country. It will be safe to follow these rules, until, by experimenting, we can find a better. There is more room for progress in this branch of Agriculture, than in almost any other.

Making the wine is as simple as making cider. The grape bunches are cut from the vines, and all unsound or unripe berries picked off the bunch and thrown into a bucket, to make—with the addition of sugar—vinegar, or an inferior wine. The perfect grapes of each day's cutting, are taken to the wine house, and in the evening, after being mashed in a barrel with a beetle, stems and berries, or passed through wooden rollers in a small mill, are put on the press, and the juice extracted. About one-third runs off without any pressure. The outer edges of the pomace are cut off for 8 or 10 inches, after the first pressing, separated with the hands, and thrown on top, when the power of the screw is applied, and another pressing made. This is repeated two or three times. The juice from the last pressing being very dark, and weak and astringent, is put with the inferior wine. The other is put in large casks, filled about five-sixths full, to ferment and make the good wine. No sugar or brandy should be added to the best Catawba juice—or must—as it makes a better wine without, and is strong enough to keep well. One end of a syphon is placed in the bung hole of the cask; the other, being crooked over, rests in a bucket of water.

The fermentation commences in a day or two, and the carbonic acid escapes through the water. In 10 or 14 days, the syphon may be removed, the casks filled up, and the bung driven in lightly—in a month, tightly. In mid-winter the wine is drawn off into another cask, and the lees of the wine, with the pomace of the grapes, is used to make brandy.

The wine will be clear, and pleasant to drink, in a month or two after the first fermentation ceases. The second fermentation occurs in the spring, about the time of the blossoming of the grapes; this is but slight, and it will be merely necessary to loosen the bungs: when it is over, the wine will be clear in two or three months, and safe to bottle, but that operation had better be deferred until November. And *this* is the whole process of making still wine—the wine for general use; and, being a *natural* product of the pure juice of the grape, it is more wholesome than any mixed or *artificial* wine, however showy and high-priced it may be.

Let the grapes be well ripened; the press, casks, and all vessels perfectly clean, and then keep the air from the new wine, by having the casks constantly *bung full*

and there is no danger of its spoiling. This is the whole secret.

It is presumed that no one will go into wine-farming largely at first, but take the precaution to test, by the cultivation of a few acres, the capabilities of his soil, position, and climate, and the kind of grape best suited to it.

R. BUCHANAN.

—*Ohio Valley Farmer.*

Chicory, or Succory.

The chicory, or succory plant, is quite common in the eastern part of Massachusetts, and for aught we know, all over New England, and yet but few people know its name or uses when they see it. It is a stout, branching plant, when full-grown, standing two to three feet in height, has beautiful sinuate leaves and bright blue flowers, and a sort of flaunting, care-for-nothing air, which makes it quite attractive. It loves warm, rich spots, and in such places will throw its tap-root so deep and strong into the ground, that more than the strength of a single man is required to pull it out.

It has been extensively grown in Belgium, Holland and Germany, and as a cultivated variety was brought into notice by the late Arthur Young, as a forage plant. The root is white, fleshy, and yields a milky juice. This is dried, roasted, and used as coffee, and is now allowed by the excise in England to be mixed and sold with coffee. The reader has quite likely often used it at his own table, when he supposed his cup was filled with a decoction of the pure Java or Mocha! The *English Quarterly Journal of Agriculture* says:—"No plant cultivated in this country will bring the cow-feeder nearly an equal return with the chicory."

We know the plant well, however, and advise every farmer who finds it growing on his premises, to eradicate it as fast as possible. If it yields a large quantity, the *quality* is bad, for the plant is a coarse, rank grower, takes possession of the whole land, and the forage is bitter and unpalatable, and will give the milk of cows an unpleasant taste. The succory is gaining ground in this region, and needs careful looking after. A species of it called *Endive*, or *Garden Succory* is extensively cultivated among us as an early salad.

When the root of chicory is to be used as coffee, it should be cleaned and put into the oven after the bread has been taken out, and allowed to remain until cold. Continue that process until the root is sufficiently brittle to be ground, and then mix a fourth or more with coffee.

The root is also used medicinally for chronic affections of the stomach, connected with torpid liver.—*New England Farmer*.

Mangel Wurzels the most Lucrative.

Anxious inquiries appear in various journals, also from our own private correspondents, which varieties of mangel-wurzels are best and most lucrative to be cultivated, or that will grow to the greatest weight, and possess the most keeping, saccharine, and nutritious food? The results of experience from any persons who have tested those inherent qualities will no doubt be received thankfully by many who have not tested the merits of all or either. Allow us to offer the little we know as pertaining to the question. "There are four varieties most commonly cultivated, namely, 'yellow globe,' 'red globe,' 'long red,' and 'long yellow,' all of which are proportionate as regards their productiveness and weight; but their inherent properties differ in degree, and the long kinds are most inconvenient for horse-culture between them, which is one objection to them, and no mean consideration. The yellow varieties have proved to us the most tender and least nutritious, and the red kinds the most juicy and hardy, also better relished by animals: in fact, the more high-bred colour there is in roots of any kind, the greater we consider is the amount of nutriment contained in them. We will not pretend to say to what amount or extent; this we leave for scientific persons to explain. Suffice for us to say, that it is well known, beer, good and drinkable, may be made from the white Silesian beet; but we would fain observe, and draw attention to the fact, that very nutritious and high-coloured wine, cheaper by far than malt-beer, can be made from the best black and crimson beets. Beasts, also, under our notice, after having been used to feed on the yellow globes, pulped and mixed with chaff (though thriving admirably), when being changed on to the long reds, ate more chaff with them, throve still better, and had absolutely to be starved before they could be induced to taste the yellow globe again; but the minute they were offered reds a second time, they ate all hand-smooth with surprising avidity. So juicy are the long reds in contrast with yellow globes, that of the former it will flow through the bottom of a basket containing the pulp, whilst of the latter it is comparatively dry. Having had no experience yet of the red globes in feeding, we leave it for others to explain who have to offer theirs. There is but little doubt, however, that in degree they possess their share of greater

succulent qualities than are in those of lighter-coloured breeds. It may be observed, too, that the long yellows are less in repute, as they grow more leafy, bushy, and fungy-rooted, like some other varieties of "betas" not here enumerated, which consequently draw most nutriment from the soil, whilst they also fail to produce sufficiently clear roots to give them a name worth of general cultivation. A. HARVEY & SOX, Seed growers,

In Mark Lane Express.

Potatoes on Grass Land.

My land is in Brewer, Me., is clayey loam, free from stones, and now free from stumps, though it has been but 12 years since it was covered with a heavy growth of pine and hemlock timber. The day before I want to plant my potatoes, I spread a fair coat of manure on a piece of grass land that was mowed the year before, and after I have spread over as large a piece as will make one day's planting, (so as to keep the manure from drying up,) I commence at one edge of the piece with a light sward plow and a strong pair of oxen, and run a rather shallow furrow as straight as possible, lapping the furrow of course on to the green sward so that the two grass surfaces will lay together. The seed is dropt about eight inches apart, on the grass land, right at the edge of the furrow that was turned up; then plow another back furrow, lapping it on the grass as before, so the two edges will meet together and cover the seed, and also the width of two furrows that has not been disturbed with the plow, that is, the two furrows are "cut and cover," as farmers call it, as is always the case when you commence in the middle of a "land" and turn with a gee, and so on for the whole piece; but this furrow is a little more difficult, for the plow must run back *in*, or at the edge of this last track, but the plow can run a little deeper this third time, so as to give it hold enough of the earth to turn up this third furrow and lap it on the grass, ready to drop another row of potatoes.

The two narrow grass surfaces are thus laid together, with the manure between them, and the potatoes are planted in the midst, where they have a warm, moist nest, and will soon sprout up through the joint of the two furrows, and the roots will run out among the grass and manure, under each sod, and get all the benefit of the decomposing grass-sward and dressing.

The seed is not so liable to be drowned by heavy spring rains, for the water will settle in the ditches made by the plow, and the plants will stand the drough better, because these two grass surfaces will retain

sweat and moisture that the mellow earth will rot. It is very little work to hoe them, for they do not need much larger hill or bed than they already have.

I have planted so for three years, and last season planted six acres of Jackson Whites in this manner, and think I can raise about double the crop per acre that my neighbors do, planted in the common way. When I dig them, the sward is very well rotted, but retains strength enough to be turned off with the hoe in flakes and lumps, and there the potatoes lay like apples on a shelf, and as clean as smelts, for they have seen no dirt, looking at you and inviting you to pick them up; and the land is in tip-top order, for these old grass sods have had a ground sward all summer, and have become quite rotten. I lack a suitable plow, for I need a *sward* plow with a mould board on each side. Will some of the plow folks see what they can get up for this purpose?

A. S. HALL.
In New England Farmer.

Correspondence.

Alsike Clover.

To the Editors of the Agriculturist.

Cobourg, 20th June, 1860.

W. A. C. of Ancaster, in your last issue, asks the proper time to cut Alsike Clover for "Hay and Seed."

Believing I have more experience with "Alsike" than any other grower in Canada, I offer the following remarks on the subject.

In former communications to your excellent journal I stated, as one of the best recommendations of the Alsike, that it will ripen its seed perfectly without much deterioration of the hay, if it does not happen to grow too luxuriant. To prevent this, I recommend turning sheep on the sward until about the 1st of June in ordinary seasons if the principal object is seed, but if the seed and hay are desiderated, better *leave the sheep outside the field*. One accustomed to clover seed growing will know by examination when the seed is fully ripened; the time will depend on the locality, here it is generally about 25th July; it will make the best hay when cut just when the blossoms are turning, which will be about 10th July.

If W. A. C. wants seed, I would advise mowing with the scythe in preference to machine, and the swath very carefully once a day for a week, and gather with a fork, raking won't do, as the seed is very easily shaken. Should the sward be dry it may be, with safety to the seed, stacked in the usual manner, and on a frosty day in winter, two willing men with pitchforks will *shake all the seed* on the barn floor and leave the hay almost as *good as new*. This means the unripe seed will remain and

a much better sample of fully ripened seed will be got than if thrashed.

I trust these remarks may be useful to W. A. C. and others who are trying this, *the best* of all the trefoils.

PATRICK WIGHT.

P. S. I cannot allow this opportunity to pass, without telling you that the present appearance of crops in this neighborhood is far beyond what that "phoenix" *the oldest man*, has any recollection of. Genial showers and warmth are bringing our mangolds and other green crops forward a *month* in advance, in fact there is not a murmur of complaint, all seem to feel deeply the *prospect* we have of being this year blessed with abundance, after the anxieties and disappointments of the last two seasons.

P. R. W.

The best Rings for Swine.

TO THE EDITORS OF THE AGRICULTURIST.—With your correspondent "Swineherd" I perfectly agree up to the fourth comma; but to be profitable, (and I think few will for pleasure breed, rear, or fatten pigs,) very careful consideration is required, and lest any should persevere in allowing their pigs to roam at large as I have done, thinking they are doing right and are making a good business of it, I tell them they are wrong, and the sooner they act differently the better.

I am a convert to the somewhat antiquated doctrine, that the devil enters into the swine as soon as his tail begins to curl, and root he will in spite of annealed, brass or copper wire, horse shoe nails, staple rings made by the blacksmith, or cutting the cartilage of the nose. Even in the very agony of death he will root—I know him.

But if any one has a farm as stony as mine was, the best ring I know of is to build a wall so that the ends come pretty near together, roof and plaster it well, put a window at each end for ventilation, lay a good plank floor, put a good trough in it well fastened down, plenty of meat and drink and a little straw, put in your pig, make a door, hang and fasten it firmly, and then, and not till then, have you got your pig properly ringed.

But as it is necessary that breeding sows, young pigs, and I believe every description of pig, should not be ringed too tight, I would recommend two yards, or "garths," as the Yorkshiremen call them, well fenced, mind you, or they will be out, if they are anything like what I have had.

Supposing the yards are nice and mellow in the spring of the year, I would recommend to sow tares or something of that sort in them, and as soon as you think necessary let out the pig into one yard, the tares in the other yard will be ready to mow for him shortly, and he

may root and you may smile, he is ringed and does not know it, the fact is he is "blarnied."

E. A. HARLAND.

Guelph, June, 1860.

Agricultural Intelligence.

STOCK IMPORTATIONS.—Mr. John Spencer, of Whitby, well known for his superior South-downs, has lately imported some valuable stock from England, consisting of two superior South-down ewes and a ram, and three pure bred Devon Calves, bred by and purchased from Lord Portman of Dorsetshire. It is some evidence of the improving prospects of our farmers, that they are beginning to enter again spiritedly into the importation of first class animals from Europe for the improvement of our Canadian flocks and herds, such enterprises having been almost abandoned during the last year or two. We learn that Mr. F. W. Stone, of Guelph, has again gone home to England with the intention of bringing out an assortment of stock of his own selection from some of the very best herds in the mother country.

The Fourth National Exhibition of imported blood and American breeds of horses, will be held on Hampden Park, Agricultural Fair Grounds, in Springfield, Mass., the 4th, 5th, 6th and 7th of September. The existence of the *Pleuro* in cattle having led to the abandonment of the State Agricultural Fair, the Directors of the Hampden County Society promptly resolved to substitute a Fourth National Horse Show, and have appointed a Board of Managers, most of whom have served in the same capacity at the former successful Exhibitions. The list of premiums has been enlarged and classified, and it is designed, aside from the exhibition in itself considered, to give greater facilities for the deliberate examination and trial of *horses intended for sale*. Springfield is easily and quickly accessible from all directions, and Hampden Park is unequalled in its track for showing or training a horse.

The Board of Managers of the State Agricultural Society of California, have fixed upon Wednesday evening, September 19th, for the State Fair, when the opening address will be delivered. The Fair will close Sept. 26th.

Horticultural.

Memoranda for July.

VEGETABLES.—Our hints for last month will to a great extent bear reperusal for this. Early cauliflowers, which will now be progressing towards maturity, must be watered in dry weather;

and as the heads begin to exhibit themselves break down some of the large leaves over them to protect them from the rays of the sun, and from rain. Winter cabbages, when the weather is favorable, may still be transplanted. If early beets and carrots have failed, seed may still be sown, and will produce a good return for autumn use. Plant cucumber seed for pickle. Peas for succession crops may be sown and soak in soft water five or six hours before planting. Sow radishes; all the common kinds. Garden turnip seed may be sown any time this month. Hoe and thin out all standing crops. Clean vacant ground; prevent weeds running. Seed. If the ground is dry, frequent hoeing will be beneficial. Use means to destroy insects. Sprinkle tobacco dust, soot, ashes, &c., upon plants affected by them. Saltpetre is pernicious to many species of insects; it is also an excellent manure, and may be used to great advantage when dissolved in the proportion of one pound to four gallons of water. This liquid applied to plants through the rose of a watering pot, will preserve health and vigor. Soaps are equally beneficial, if used occasionally in the same manner, say once a week. These remedies applied alternately, have been known to preserve melon and cucumber vines from the ravages of the yellow fly, bugs, blight, &c., and to keep plants in a thriving condition.

FRUIT—We gather the following hints principally from Bridgeman:

"The principal business of this month in the fruit garden is summer pruning, which is generally performed with the finger and thumb, detaching all superfluous shoots and buds; also to thin the young fruit of Apricot, Nectarine and other choice trained trees, where it sets thick or in clusters. The Apricots, so thinned off, and the first principal green fruit, will make excellent pies and tarts.

Currant and Gooseberry shrubs of choice varieties, trained as espaliers or standards, very crowded with shoots of the year, should be pruned, and the Gooseberry fruit thinned, to promote its growth and ripening in full perfection.

All trees on espaliers require attention; cut off such superfluous shoots as are not required to be trained in, leaving well-situated middle sized shoots to supply the place of any branches that it may be thought necessary to cut away.

Grape Vines should be looked over every week. Cut off all the tendrils and useless young shoots, and stop the shoots before the bunches of fruit are formed. Train up the shoots for bearing next season, to a proper length, before you stop them.

Newly planted trees should be watered in hot weather; an occasional hoeing around the

will also be beneficial, but care must be taken not to injure the roots.

The trained trees and espaliers should be examined frequently, and cleared of dead leaves and insects; which can be done by the hand, with very little trouble.

Defend choice fruit from birds and insects, such as wasps, flies, &c.; the birds may be kept off by nets, and the insects may be decoyed and drowned, by placing phials of strong liquor, honey, or sugared water near the fruit.

If annoyed with ants, place cuttings of reed, hollowed elder or anything of a tube-like kind, in which they will harbour, and may be destroyed by dipping the tubes in hot water.

If mildew appear on Grape Vines, syringe them with water, in which a small quantity of sulphate and stone lime has been infused, (it need not be over strong.) To prevent any injurious effects from the lime, the vines may be irrigated alternately with the liquid and pure water, each two or three times a week. A little sulphur dusted over while the leaves are wet is also a good remedy.

Look over your trained Fruit Trees and Grape Vines, stop the shoots before the bunches of fruit, and train up such shoots as are reserved for bearing next year. Nip off curled and dead leaves, and destroy insects.

Toward the end of this month is the proper season for budding the Nectarine, Peach, Plum, and other species of stone fruit. The Peach stock is often budded when only a year old, but the Plum stock is generally kept in the nursery two or three years.

Apple and Pear stocks may be budded when two or three years old, but those fruits are generally propagated by grafting early in the spring. A judicious pruning of Peach, Nectarine, and other kinds of young trees is necessary at this season. To prevent the long, straggling growth of limbs which are frequently bare of shoots for some distance from the body of the tree, such limbs should be shortened, which will cause the production of lateral shoots. An annual summer pruning is essential to the well being of a tree, by shortening the wood of the preceding year's growth, a symmetrical tree containing a good supply of bearing wood may be formed. By this treatment the longevity of a tree will be promoted, provided the work is done with judgment and care, so as not to render the tree impervious to the influence of the sun and air; for, be it remembered, that the head of a tree must always be kept moderately open, for the purposes of giving the fruit the best possible chance of ripening perfectly.

THE STRAWBERRY.—In cultivating the Strawberry, an open situation and rich loamy soil, rather strong, is required for most varieties; and when their large mass of foliage and flowers, they are first set, have copious supplies of water. The row culture is best calculated to produce fine fruit; and frequent renewal insures vigorous plants as well as large fruit. Some plant them in single rows, from twelve to eighteen inches apart, according to the sorts; others form a bed with four rows. If several beds be intended, a space of

two or three feet may be left between each bed as a path; and in the second or third season, the paths may be manured and dug to admit of the runners taking root, by this means, a renewal may be made so often, and the old stools being taken away, leaves spaces between the beds as before. Or new plantations may be made every season, because, after the roots are fairly established, they multiply spontaneously, as well by suckers from the parent stem, as by numerous runners; all of which, rooting and forming a plant at every joint, require only removal to a spot where there is room for them to flourish. If taken off, and planted in rows in August and September, they will produce fine fruit the following season, and will bear in full perfection the second summer, some, however, prefer spring planting, which answers very well, if done in damp weather.

THE FLOWER GARDEN.—The following hints from Buist's "American Flower Garden Directory" will be found useful and interesting to those who delight in beautiful flowers:—

"CULTURE OF THE HEART'S-EASE OR PANSY.—The simplicity and striking beauty of this lovely little flower have attracted notice from the earliest floral times, but it is only within these few years that it has come into high estimation as a florist's flower. Indeed, when the figures and descriptive characters of these "little gems" came first from England to this country, we were almost induced to believe they were exaggerated "pictures of fancy," till we actually cultivated them within these last two years, in our own parterre, upwards of two inches in diameter.

They delight in a situation partially shaded from the hot rays of the sun, either fully exposed to the morning rays till ten o'clock, or the afternoon sun from three o'clock; a soil composed of four parts good loam and one part thoroughly rotted manure, or three parts loam and one part decayed leaves, not less than one foot deep; the soil must not be more elevated than the surrounding surface as they like a good supply of moisture. If they are to be cultivated from seeds, they should be thinly sown about the first of May, or about the end of August or first of September, and very lightly covered with fine soil, giving them very frequent waterings in dry weather. These sown in May will bloom in July, and very profusely in the autumn; but those sown in the latter period will not bloom till early the following spring. When any very esteemed variety is raised, it should be propagated, which is very easily done, either by layers or cuttings, and sometimes by division of the root, but the two former methods are preferable. The best time for laying is about the first of September: an inch or two of the soil may be removed all round the plant, the shoots laid down in the hollow, and covered over with light rich compost. The shoots will root more freely if they get a gentle twist when laying them down. The best period for propagating by cuttings is about the middle of May or September. Cuttings should be chosen from young shoots, about two or three inches long; for when shoots are woody or hol-

low they will either not strike at all or produce unhealthy plants. A shaded but airy situation is preferable, and if the soil is of a light sandy nature, the better success will attend the operation: the cuttings should be firmly inserted from one to two inches deep in the ground, and covered with a glass, or where that convenience is not at hand, they may be shaded during the day with oiled paper, or any similar substitute. In preparing the cuttings, care ought to be taken to cut close to a joint, a rule which should be strictly attended to in making cuttings of every description. When they have fairly rooted and taken a growth, they can be removed in cloudy, moist weather, to their proper allotments. Seeds ought to be carefully collected from the finer sorts, and sown as soon thereafter as convenience will allow, as they deteriorate by long keeping. Many hundreds of named varieties are carefully cultivated in England. A select list sent contains only three hundred and seventy-four names. To attempt a general or even brief description of them, would be considered prolix and unnecessary; but the following criteria of a fine Pansy has just passed a select committee of the Pennsylvania Horticultural Society:—

“The chief object to be desired is symmetry of the flower. The petals should be large, broad, and flat, lying upon each other so as to form a circle, and prevent anything like angles or intersections of this circular outline. The petals should be as nearly of a size as possible, the two top ones being the largest, but so covered with the two side ones as not to appear disproportioned. The top petals should not wave or bend back. The bottom petal should be broad and two-lobed, flat, and not curving inward: above an inch in breadth is a good size; and the colours should be clear, brilliant, and not changing. The eye should not be too large, and it is accounted finest when the pencilling is so arranged as to form a dark angular spot.

“The flower-stalk should be long and stiff, rather than slender.”

CARNATIONS AND PINKS.—In order to make the former flower well, if the weather is dry, give them frequent waterings at the root, and tie them up neatly to their rods. *The criterion of a fine Carnation is*—The stem strong and straight, from thirty to forty inches high; the corolla three inches in diameter, consisting of large, round, well-formed petals, but not so many as to crowd it, nor so few as to make it appear thin or empty; the outside petals should rise above the calyx about half an inch, and then turn off in a horizontal direction, to support the interior petals, they forming nearly a hemispherical corolla. The interior petals should decrease in size toward the centre, all regularly disposed on every side; they should have a small degree of concavity at the lamina or broad end, the edges perfectly entire. The calyx above one inch in length, with strong broad points in a close and circular body. The colours must be perfectly distinct, disposed in regular strong stripes, broadest at the edge of the lamina, and gradually becoming narrower as they approach the unguis or base of the petal, there terminating in a fine point. Those that

contain two colours upon a white ground are esteemed the finest.

The criterion of a double pink.—The stem about twelve inches, the calyx smaller, but similar to a carnation, the flower two inches and a half in diameter; petals rose edges; colour white, or pure purple, or rich crimson; the nearer it approaches to black the more it is esteemed; proportions equal as in carnation. Those that are very tasteful with these flowers are attentive to the manner of their opening. Where the calyx is deficient in regular expansion, to display the petals; that is, where there is a tendency to burst open on one side more than on the other, the opposite side in two or three different indentations should be slit a little, at several times with the point of a small sharp knife, taking care not to cut the petals, and about the centre of the calyx tie a thread three or four times round to prevent any further irregularity. Some florists and connoisseurs place cards on them. This is done when the calyx is small. Take a piece of thin pasteboard, about the size of a dollar, cut a small aperture in its centre to admit the bud to pass through. When on, tie it tight to the stem to prevent the wind from blowing it about; and when the flower is expanded, draw up the card to about the middle of the calyx, and spread the petals one over the other regularly upon it. When these plants are in flower, their beauty may be prolonged by giving them a little shade from the mid-day sun by an awning of any simple description. Where they are in pots, they can be removed to a cool shady situation (but not directly under trees.)

OF LAYING CARNATIONS AND PINKS.—This is a necessary and yearly operation to keep a supply of plants, and likewise to have them always in perfection. As the process of laying, though simple, may not be known to all who are desirous of cultivating these plants, we will give an outline of the mode of operation. Provide first a quantity of small hooked twigs (pieces of *Asparagus* stems are very suitable,) about three inches long, for pegging the layers down into the earth. Select the outward, strongest and lowest shoots that are round the plant; trim off all the under leaves, and shorten the top ones with the knife, and then applying it at a joint about the middle of the under side of the shoot cut about half through in a slanting direction, making an upward slit toward the next joint near an inch in extent; and loosening the earth make a small oblong cavity one or two inches deep, putting a little fresh light earth there. Lay the stem part where the slit is made into the earth, keeping the cut part open, and the base of the layer upright one or two inches out of the earth; and in that position peg down the layer with one of the hooked twigs, and cover the inserted part to the depth of one inch with some of the fresh earth, pressing it gently down. In this manner proceed to lay all the proper shoots on each plant. Keep the earth a little full around the plant, to retain longer the water that may be applied. Give immediately a moderate watering with a rose watering-pot, and in dry weather give light waterings every evening. Choose

cloudy day for the above operation. In about two months they will be well rooted.

J. F.

Orchard Houses for the United States.

[We have just received the following letter upon this subject, for the *Country Gentleman*, from Thomas Rivers, Esq., of Sawbridgeworth, Hertfordshire, England, the noted Rose Grower, and author of the treatise on the "Orchard House," lately republished at New-York. Mr. R. has also favoured us with another communication, the appearance of which we are obliged to defer until next week. *ENS. CO. GENT.*]

Sawbridge, England, May 17, 1860.

I observe from an advertisement in the Horticulturalist, that Messrs. Saxton & Co., have published my little book, "The Orchard House." I am rejoiced at this, for gardening knowledge cannot be distributed too widely. I have, however, some fears that what is good sound practice here, in orchard-house culture, may be, to a certain extent, unfitted for your climate, and so am sure you will excuse me if I give a few words of caution.

1st. Your winters are so severe that the utmost precaution must be taken to keep the roots of the trees in pots, protected from frost. This must be done by mulching them to a great extent, say at least one foot in depth over the surface of the pots, and care should be taken that it fills up all the interstices between the pots.

2d. Your summers are so scorching, compared to ours in England, that instead of ventilating cutters in each side of a 14 feet wide house being 1 foot in depth, they should be two feet, and perhaps it would be advisable to have all the boards below the glass at the sides removable, so that in summer all the lower boards beneath the glass, as described in page 16 of the 7th edition, should be taken away, and a stout net placed in lieu of them, thus keeping out heavy gales of wind, birds, &c., and yet admitting abundance of air.

I am however inclined to think that in your climate, apricots, plums, and nectarines, should be placed out of doors at the end of June, to ripen their fruit, for I apprehend by that time the ravages of the curculio will be over.

I say this, of course, with due submission, for I only judge of the effects of your climate from what I read. I cannot help thinking that with the aid of these cheap well ventilated houses, you will be able to circumvent your great enemy the smooth-skinned stone fruits, the curculio, and the new apricots, plums, and nectarines, to great perfection.

In houses of 20 feet in width, I should recommend the sides open, and openings in the roof (if necessary,) to let off the air heated by the burning sun. These few hints are merely "word to the wise," for your clever amateur

cultivators will soon learn how to adopt orchard houses to the exigencies of your climate. Such houses will, to a certainty, protect the Blossom buds of peaches, nectarines and apricots from injury by your severe frosts in winter, the blossoms in spring, and I think the fruit of the latter two from the curculio. *THOS. RIVERS.*
—*Country Gentleman.*

The Dairy.

Cheddar Cheese.

Morton's "Hand-Book of Dairy Husbandry," gives the following account of the manner in which this celebrated cheese is made:

Cheddar Cheese-making differs from that already described, chiefly in the scalding of the curd; which is done by heating a portion of the whey, and letting the curd remain in it for a considerable time, at a temperature even above the natural heat of the milk. The following description of the dairy management of Mr. Harding, at Compton Dando, Somersetshire, is given by the deputation from the Ayrshire Agricultural Society, who visited the farm in 1854. The milk is poured from the pails through a sieve into a receiver outside, from which a pipe conveys it through the wall to the cheese-tub or to the coolers. A canvas bag is also placed over the inside end of the pipe, so that a double precaution is used against impurities entering with the milk.

The rennet is prepared much in the way that it is done in many Ayrshire dairies. Mrs. Harding steeps five vells at once, and this usually suffices for two weeks, in which time about 21 cwt. of cheese may be made. The vells appear to have been carefully cleaned and preserved.

Immediately after the morning milking, the evening and morning milk are put together into the tub. The temperature of the whole is brought to 80 degrees by heating a small quantity of the evening milk. In spring and towards winter a small quantity of annatto is used to improve the color of the cheese. It is put into the milk along with the rennet at seven o'clock. After the rennet is added, an hour is requisite for coagulation. At eight o'clock the curd is partially broken and allowed to subside a few minutes, in order that a small quantity of whey may be drawn off to be heated. This whey is put into a tin vessel and placed in a boiler in an adjoining apartment, to be heated in hot water. The curd is then most carefully and minutely broken, and then as much of the heated whey is mixed with it as suffices to raise it to 80 degrees—the temperature at which the rennet is added. Nothing more is done to it for another hour.

A little after nine o'clock a few pailfuls of whey are drawn off and heated to a higher temperature than at eight o'clock. The curd is then broken as minutely as before, and after this

is carefully done, an assistant pours several pails of the heated whey into the mass. During the pouring in of the whey the stirring with the breakers is actively continued in order to mix the whole regularly, and not to allow any portion of the curd to become overheated. The temperature at this time is raised to 100 deg., as ascertained by the thermometer, and the stirring is continued a considerable time, until the minutely broken pieces of curd acquire a certain degree of consistency. The curd is then left half an hour to subside.

At the expiry of the half hour the curd has settled to the bottom of the tub. Drawing off the whey is the next operation. The greater proportion is lifted in a large tin bowl, and poured through a hair sieve into the adjoining coolers. As it runs into the leads it appears to be very pure. When the whey above the mass of curd is thus removed, a spigot is turned at the bottom of the tub, and the remainder is allowed to drain off, which it does very rapidly without any pressure being required. To facilitate this part of the work the tub is made with a convex bottom, and the curd is cut from the sides of the tub and placed on the elevated center. It is carefully heaped up, and then left for an hour with no other pressure than its own weight. After this interval it is cut across in large slices, turned over once on the center of the tub, and left in a heap as before for half an hour. The whey drips away towards the side of the tub, and runs off at the spigot: and no pressure being applied, it continues to come away comparatively pure. After undergoing these easy manipulations, and lying untouched during the intervals that have been mentioned, the curd is ripe for the application of pressure. But great care is taken not to put it into the vat to be pressed at too high a temperature. If the heat be above 60 deg., and it usually is higher at this time, the curd is broken a little by the hand and thrown upon a lead-cooler, until it is brought down to the desired temperature.

The after-management of the cheese resembles that of Cheshire. A little salt, $1\frac{1}{2}$ lbs. per cwt., or thereabouts, is added to the crumbled curd, and it is mangled and broken by the curd mill. The cheese vats are placed under the machine, and are piled one above the other as the curd falls down. A cloth is put over each vat when the breaking is over, the curd is reversed in the cloth, put back into the vat, covered up, and placed in the press for about three-quarters of an hour. After this, the cheese is taken out, and a cloth wrung out of warm water is put on it. It is again changed at two and at six o'clock, after which dry clothes are put on it. Care is taken that the cheese fills the vat properly. To accomplish this, the vats, at making up, are filled rather full, and the edges of the cheese are pared in the afternoon. Next morning the cheese is rubbed on both sides with salt, and the same cloth is put on again. On the third morning it is treated in a similar man-

ner. The cheese is put into the vat without a cloth on the fourth morning, and a little salt is rubbed over it to keep it from adhering to the wood. After the fourth morning it is reversed in the vat, without a cloth, each morning until the process is complete, about the sixth or seventh morning.

We may mention here that Messrs. Cokey of Frome, make an apparatus by which a jacketed cheese tub of tin may be surrounded by a stream of hot water, and so the milk and whey retained at any temperature that is required, without the necessity of removing large quantities of milk or whey to a boiler every time of cheese-making for the purpose of being heated.

Butter Making.

The following article on Butter Making is contributed to the *Rural New Yorker* by A. D. Bart, who has taken many premiums for butter at fairs in New York State, where, generally speaking, you find good butter. The remarks are useful and practical and can be understood by any one.

First—I consider that it is absolutely necessary to have good, sweet pasturage, with an abundance of the best grasses, and an unintermittent supply of pure fresh water, not such detestable stuff as can be found in stagnant pools, but such as you behold when you “see the rill from the mountain joyously gleam,” where the cows exult to slake their thirst and feel invigorated. The pasture should have shade trees sufficient to accommodate all, without the necessity of disturbing each other in the excessive heat of midsummer. Then have cows suitable for a butter dairy—not those that give the largest amount of milk, but the richest, yielding a large supply of the rich orange-colored cream. The cows should be salted regularly, at least twice each week, as it will keep them in health and in a thriving condition, which is needful for production. Always be sure to drive them carefully to and from the pasture: never allow them to be worried by boys or dogs, as it will tend to heat the milk and often cause great delay in the churning, which some will impute to witchcraft, and that correctly,—but the witchery, I believe, is in over-heating the inoffensive cow and often causing injurious effects upon the poor dairy beast.

Always be regular in your time for milking and let one person (as much as possible,) milk the same cow or cows, and be sure to milk them as quick and thoroughly as possible, for thereby save the richest part, and often save knots from forming in the teats, or causing milk fever, or inflammation in the udder. Clean, cool, airy and light room (the lighter the better,) is the most suitable place, on racks instead of shelves is considered the best, and

air can then circulate freely around the pans, cooling the milk more evenly. A common house cellar will very seldom be found a suitable place for setting milk, and the cream or milk in a cellar should *never* be placed on the floor or bottom, for if there is any impure gas in the cellar it will settle to the bottom, causing the cream to be bitter, and a poor quality of butter will be the result.

After setting the milk away it should never be disturbed again until it is ready to be skimmed, which should be done as soon as possible after the cream has fully risen and before the milk has curdled, say in thirty-six hours, (never more than forty-eight,) and often it must be done in twenty-four hours; all the gain there is in quantity after about twenty-four hours setting, you must of necessity lose in quality, and in greater ratio. Keep the cream in stone pots or cans, (tin pails will rust the cream,) in a cool place in summer, (moderately warm in winter.) Sprinkle a little salt on the bottom of the jar. Always stir the cream well together from the bottom every time you add a fresh skimming of cream. Never churn until at least twelve hours after the last cream has been put into the jar.

After the cream has been churned and the butter properly gathered, it should then be washed in cold water, and the water changed two or three times, or until there is no coloring of milk about the water; the whole of the water must then be worked from the butter, (for if left will sour it,) and should be salted with about twelve ounces of the best Ashton dairy salt, well pulverized, to sixteen pounds, or three-fourths an ounce of salt to each pound of butter. The salt should be evenly worked through the entire mass. Here I know I differ much, with many of our butter-makers, in the quantity of salt, and so in the amount the butter should be worked; but I have taken the first premium, at our County Fair (in the fall,) on a June-made butter that was salted with half an ounce of salt to each pound, and packed immediately, without a second working, and that butter, when thirteen months old, was just as sweet as when first packed; any one wishing for better, ought to be obliged to go without any.

Always pack immediately, as it tends to make salty and streaked if it is worked a second time. It should be packed in jars, if for home use; if for market, in the best oak firkins or kegs, which should be well soaked with cold water, then scalded and steamed by pouring boiling water in, and covering to keep the steam a short time, say twenty to thirty minutes. Then pour off the water, and scrub the firkin with salt, or with soda, or saleratus and salt; wipe out the surplus salt and give it a slight wash, and when it is cooled it is ready for use. When the firkin, or jar, is as full as it should be, cover the butter with good sweet brine, to exclude the air, and if you keep it in a suitable place after this, my word for it you will have as good butter to set before our next Presi-

dent, the fourth of March, 1861, let him be chosen from whatever party or section of the United States he may.

Poultry.

Raising Young Turkeys.

Richardson, in his work on the Domestic Fowl, has these remarks:

Many writers recommend a vast deal of quackery in the treatment of the young chicks. Some go the length of ordering them wine, pepper, bathing in cold water, etc. It is far better to let them alone. For a few hours after hatching, the chicks require no food at all; and then, instead of cramming them—a process in which you are likely to break the tender beak of the little chick—chop up a few hard eggs with boiled nettles, parsley and a little bread or curd; make this into a paste, and present it to the birds in the palm of your hand, or place it before them on a stone, taking care that the hen does not rob them. In supplying them with water, be careful to put it into very shallow vessels, that they cannot wet themselves; for the least moisture appears fatal to them. As the turkey chick does not seek its food immediately on leaving the egg, and the hen seems incapable of instructing her little offspring how to do so, it is a practice with some to put a few common hen's eggs among the turkey's (which must be done nine or ten days after setting,) that these coming out with the little turkeys may, by force of example, teach them to provide for themselves.

Unless in very warm weather the hen and chicks should be housed for a month. If they appear drooping, put powdered carraway seed and a little Cayenne pepper into the food. If you mix the food with milk, let it be previously boiled. Unboiled milk will purge the chicks; but for my own part I prefer pure water.

At the age of about two months occurs the most critical period in the life of a turkey, called "shooting the red," or the time when the head and neck acquire the reddish color of adults. This crisis once past the birds may be regarded as past danger, and exchange the name of chicks for that of turkey poults. The only treatment necessary when a bird is shooting the red, is to furnish nutritive food with a small pinch of Cayenne pepper. Bruised hemp-seed is also found serviceable.

Take care that young turkeys never go out on any account, (except in dry weather,) until the dew is off the ground; and this should be adhered to till they get to be the size of an old partridge, and have their backs well covered with feathers; and in wet weather they should be kept under cover all day long. As to the feeding of them when young, many nice things are recommended—hard eggs, chopped fine, with crumbs of bread, and a great many other

things, but that which I have seen used, and always with success, and for all sorts of young poultry, is milk turned into curds. This is the food for young poultry of all sorts. Some should be made fresh every day, and if this be done, and the turkeys be kept warm, not one out of a score will die. When they get to be strong they may have meal and grain; but still they always love the curds. When they get their head feathers, they are hardy enough; and what they want is room to prowl about. It is best to breed them under a common hen, because she does not ramble like a hen turkey; and it is a very curious thing that the turkeys bred up by a hen of the common fowl do not themselves ramble much when they get old.

Domestic.

CURRANT WINE.—This article as usually manufactured is rather a cordial than a wine, and is entirely inferior to the common wine; but when properly made, it is a very superior, healthful beverage, particularly for summer drink, when fully diluted with water. Before pressing the juice from the currants, pass them between a pair of rollers to crush them, after which they must be placed in a strong bag, and they will part with the juice readily with light pressure, such as a common screw, heavy weights, &c. To each quart of juice add three pounds of double refined loaf sugar—single refined sugar is not sufficiently pure—then add as much water as will make one gallon. Suppose the cask intended to be used is 30 gallons. In this put 30 quarts of currant juice, 90 lbs. of double refined sugar, and fill the cask to the bung with water; roll it over until the sugar is all dissolved. This will be told by its ceasing to settle in the barrel. Next day roll it again, and place it in a cellar where the temperature will be sure to be even. Leave the bung loose for the free admission of air. In the course of one or two or three days, fermentation will commence. By placing the ear to the bung-hole a slight noise will be heard such as may be observed when carbonic acid is escaping from champagne or soda water. Fermentation will continue for a few weeks, converting the sugar into alcohol. As soon as this ceases, drive the bung in tightly, and leave the cask for six months, at the end of which time the wine may be drawn off perfectly clear, without any excess of sweetness.

CHLORIDE OF LIME FOR RATS.—A correspondent of the *Gardener's Monthly* says: "I tried the effect of introducing into the entrances of their numerous holes, runs, or hiding places, small portions of chloride of lime or bleaching powder, wrapped in calico and stuffed into the entrance holes, and thrown loose by spoonsful into the drain from the house. This drove them away for a twelvemonth, when they returned to

it. They were treated in the same manner with like effect. The cure was complete. I presume it was the chlorine gas which did not agree with their olfactories.

CURE FOR CORNS.—A correspondent of the *London Field*, in reply to an enquiry for a remedy for corns, says—"If 'A Poor Cripple' will take a lemon, cut a piece of it off, then press it so as to let in the toe with the corn, the pressure next the corn, tie this on at night so that it cannot move, he will find the next morning the corn with a blunt knife, the corn will come away to a great extent. Two or three applications of this will make 'A Poor Cripple' happy for life, and I shall be glad to hear the result."

Miscellaneous.

WHITE CLOVER IN PASTURES.—The growth of white clover on soils natural to its products may be encouraged and promoted by a dressing of plaster and ashes. Its chief value is for pasture, as it is of too dwarf a growth to give much of a hay crop. A writer in the *London Cultivator* says, "there is an advantage in pasturing white clover which does not strike every farmer. Each joint furnishes a fresh root (and of course a fresh plant,) whenever a joint comes in close contact with the soil, and consequently the more it is trodden the thicker will spring up. Hence one reason why it grows most luxuriantly near the bars and gateways of our pastures, where cattle often congregate. Many farmers have observed this last mentioned fact without getting hold of the reason therefor. The natural growth of various grasses, self-seeds upon all our soils, is a matter of curious interest to the naturalist and the farmer observing nature.—*Country Gentleman*."

TO MEASURE HAY STACKS.—More than twenty years since, the following method for measuring hay, was taken from an old publication. I have both bought and sold by it, and I believe it may be useful to many farmers: Multiply length, breadth, and height into each other, if the hay is somewhat settled, ten solid feet make a ton. Clover will take from ten to twelve solid yards per ton. Five hundred and twenty cubic feet in a compressed or well settled stack is regarded equal to a ton of good hay.—*Southern Planter*.

FARMERS! PLANT BEFORE THE FULL MOON. Upon the growth of plants the moon exerts a remarkable influence. The chemical action of light is necessary to their principal work, the absorption of carbon from the carbonic acid of the atmosphere. This work all plants perform during the day, and in the night they except when the moon shines. She wakes them and sets them at work. So the farmer should plant only just before the full moon and not the scoffers who call them superstitious.

emselves the foolish ones. For, if sown before or near new moon, the young plants get above ground just at the full, when the tender things need sleep. But if sown just before the full, they come up about new moon, pass their boyhood under the soothing influence of dark nights, and when the full moon comes are sturdy fellows, able to work night and day.—*English Paper.*

THE NATURE OF WOMEN.—As my father used to say of women, you must study their nature. When he lived at Sheffield, and his establishment was small, he never rang the bell for the maid, but, when he wanted her, always went out to the street to call her; he said women were never to be found looking out of the window. In the same manner, he always hired the prettiest girls he could find; they waited for the men to run after them, but the ugly ones always wasted their time running after the men; one stay'd at home, and the other didn't.—*The Season Ticket.*

ALLITERATIVE POETRY.

Alphabetical Assertions, Briefly Collected; Describing Elegant Flirtations, Generally Happening In Joking, Kissing, Larking, Merry-making, Nutting, (Opportunity Producing Queer Passages), Small Talk Under Volk's Windows, 'Exciting Youthful Zeal, &c.

Arthur Asked Amy's Affection,
Bess, Being Benjamin's Bride,
Bolly Cut Charles's Connection;
Deborah Dickey Denied.
leanor's Eye Efficacious,
Frederick's Fatality Feels;
Giles Gained Georgiana—Good Gracious!
Harry Hates Helen's High Heels.
Isabel's Idol,
Jenny Jeers Jonathan Jones;
Miriam Knows Knock Kneed Kit Kriedel.
Love's Leering Lucy's Long-bones.
Mary Meets Mortifications,
Nicholas Nancy Neglects,
Peter's Odd Observations
Proves Peter Poor Patty Protects!
Quaker Quintillan's Queer Quibbles
Red Rachel's Reasons Resist;
Simon's Sympathy Scribbles
Tales To Tall Tabitha Twist.
Una Unthinking, Undoing
Volatile Valentine's Vest,
William's Wild Wickeder Wooing
Acceds Youthful Zelica's Zest."

ORIGIN OF VARIOUS PLANTS.—The annual meeting of the Paris Society of Acclimatation, according to the *Revue Horticole*, the present year manifests a flourishing condition in that respect and useful body. M. St. Hilaire, the President, delivered an interesting discourse, and the Vice President, M. de l'Huys, read a paper upon the most celebrated gardens of anti-

quity, in which he glanced at the origin of the various new plants derived from the East, and, later, from the New World. We translate from this part of his interesting memoir the following facts:

Cereals.—Wheat and buckwheat came from Asia—rye from Siberia—rice from Ethiopia.

Vegetables.—The cucumber from Spain—the artichoke from Sicily and Andalusia—the chervil from Italy—cress from Crete—lettuce from Coos—the white cabbage from the North—the red and green cabbage, the onion and parsley from Egypt—the cauliflower from Cyprus—spinach from Asia Minor—asparagus from Asia—the pumpkin from Astracan—the eschalot from Ascalon—the bean from India—the radish from China—the melon from the East and from Africa—the potato and the Jerusalem artichoke from America.

Fruits, &c.—Asia sent forth the filbert, the pomegranate, the walnut, the quince, and the grape—Armenia the apricot, Media the citron, Persia the peach, India the orange, Mesopotamia the fig, Pontus the cherry and the hazelnut, Lydia the chestnut, Syria the plum, Mauritania the almond, and Greece the olive.

Among plants of different uses may be mentioned the Coffee, originally from Arabia, Tea from China, the cacao (cocoa) from Mexico, tobacco also from the New World, anise from Egypt, fennel from the Canaries, the clove from the Moluccas, the castor oil bean from India, &c.

Trees.—The horse-chestnut came from India, the laurel from Crete, the elder from Persia, &c.

Flowers.—The narcissus and carnation came from Italy, the lily from Syria, the tulip from Cappadocia, the jasmine from India, the starwort from China, the nasturtium from Peru, the dahlia from Mexico, &c.

Is it not time to ask—queries M. Barral after the above quotation—if any vegetation at all naturally belongs to the Gauls? He claims, at least, the oak tree, but adds that the success of past "acclimatations" should encourage every nation to try new ones.—*Country Gentleman.*

TWO MINUTE SERMONS TO THE GIRLS.—Ladies—caged birds of beautiful plumage, but sickly looks—pale pets of the parlour, who vegetate in an unhealthy atmosphere like the potatoe germinating in a dark cellar, why do you not go out into the open air and warm sunshine, and add lustre to your eyes, bloom to your cheeks, elasticity to your steps, and vigor to your frames? Take morning exercise, let loose your corset strings, and run up the hills for a wager, and down again for fun; roam the fields, climb the fences, leap the ditches, wade the brooks, and after a day of exhilarating exercise and unrestrained liberty, go home with an appetite acquired by healthy enjoyment. The blooming and beautiful young lady—rose-cheeked and bright-eyed—who can darn a stocking, mend her own frocks, command a regiment of pots

and kettles, feed the pigs, milk the cows, and be a lady when required, is the girl that young men are in quest of for a wife. But you pining, screwed-up, wasp-waisted, doll-dressed, consumption-mortgaged, music-murdering, and novel-devouring daughters of fashion and idleness—you are no more fit for matrimony than a pullet is to look after a brood of fourteen chickens: The truth is, my dear girls, you want less fashionable restraint and more liberty of action; more kitchen and less parlour; more leg exercise and less sofa; more pudding and less piano; more frankness and less mock modesty. Loosen your waist strings, and breathe in the pure atmosphere, and become something as good and beautiful as nature designed.

Widow: Don't you mean to marry, my dear sir?

Confirmed bachelor: No. I'd rather lose all the ribs I've got than take another.

Transactions.

Meeting of the Board of Agriculture.

HAMILTON, JUNE 19, 1860.

The Board met this day, pursuant to call of the President, at noon, at the Royal Hotel.

Present:—Messrs. E. W. Thomson, President, R. L. Denison, Hon. D. Christie, Hon. G. Alexander, W. Ferguson, J. Wade, President of the Agricultural Association; Dr. Beatty, President of the Board of Arts and Manufactures; J. E. Pell, Vice-President of do.

The minutes of last meeting were read and approved.

The following communications were submitted:—

From South Wellington, West Northumberland, North Leeds and Grenville, South Ontario, Co. Haldimand, South Grenville, Seneca, Oneida and North Cayuga, Etobicoke, North Simcoe, North Lanark, Rochester and Maidstone, South Wentworth, Co. Bruce, City of Hamilton, Orillia, South Dorchester and West York Agricultural Societies, all objecting to certain proposed alterations in the Agricultural Statute.

From Mr. J. S. Wetenhall, Secretary and Treasurer of the Hamilton Electoral Division Agricultural Society, enquiring whether the members of that Society would be admitted as members of the Provincial Association this year, if the sum of Thirty Dollars, which the Society was in debt from last year, should be deducted from the funds of the present year when paid over to the Treasurer of the Provincial Association.

From Mr. Hutton, Secretary of the Bureau of Agriculture, in accordance with an address of the Legislative Assembly to His Excellency the Governor General, asking for return of the amount of public money annually granted to the Agricultural Societies in Upper Canada, since the year 1850, and the amount annually contributed by the Societies as a basis for the grant, the amount annually granted to the Board of Agriculture since its establishment, showing the several objects on which the same has been expended, and the amount expended on each. The Secretary also submitted a draft of the return furnished in accordance with this communication.

From Hon. H. H. Killaly on the part of the Department of Public Works, desiring the Board to place a Fire Hydrant near the Government House Stables now in occupation of the Board.

From Serjeant Dunbar, asking for some compensation in consequence of having been ejected from the Caretaker's House on the Exhibition Grounds, Toronto, by the Mayor of that city.

From Professor Buckland, from Quebec, on his way to England, suggesting the expediency, for certain reasons, of leasing the Experimental Farm for a limited period.

From Mr. Bawbell, Secretary of Ontario Agricultural Society, stating that the County of Peterboro' Agricultural Society had withdrawn from them a part of their due proportion of the public grant, and requesting that the Board would cause the amount to be paid them.

From Mr. E. A. McNaughton, Newcastle, suggesting the desirableness of awarding medals at the Provincial Exhibition, in some cases, in place of money prizes.

From the Senate of the University of Toronto, declining to take the Experimental Farm off the hands of the Board of Agriculture on the conditions upon which the Board originally entered into possession of the same at present.

From Mr. Hutton, of June 8th, enclosing copy of Order in Council, dated June 28th, 1860, recommending the appropriation of "\$10,000 from the vote for expenses connected with the visit of His Royal Highness the Prince of Wales, in aid of the Agricultural Exhibition to be held in Hamilton, being important to afford every assistance in making the display of the Agricultural productions and industry of the Western

of the Province as general and useful as possible, and thus to afford his Royal Highness and his suite an opportunity of judging of the wealth and prosperity of Western Canada." Mr. Hutton further stated that the Government had yet no exact information as to the time of the Prince's visit.

From F. W. Stone, Esq., second Vice-president of the Association, suggesting the propriety of offering handsome premiums for herds of Cattle, say for one bull and 4 cows & heifers, each herd, and making certain other suggestions in regard to the revision of the Prize List, and the general management of the Exhibition.

From Mr. Hutton, June 12, containing other information in regard to the appropriation in aid of the Exhibition.

From the Department of Public Works, Quebec, June 15th, requesting the Board to vacate the premises now occupied by them on Government House property at the disposal of Mr. Killaly for the purpose of being ready for the visit of the Prince of Wales & his suite.

From Dr. Rees, of Toronto, presenting to the Board an interesting and valuable work on the Cultivation and Preparation of Hemp, published by Robert Wissett, of the East India Company's Service, London, 1808.

From Mr. E. C. Fisher, Etobicoke, offering to fit up a portion of his mill on the River Humber, as a Flax Mill, on condition of receiving an advance from the Board, to be afterwards repaid.

Reports were submitted from the Special Committee appointed at the last meeting on the subject of Drainage, the Experimental Farm, amendments to the Act, auditing the accounts, &c. The Committee reported that they had leased the Experimental Farm to Mr. F. Shanly for two years, at £100 per annum, of which amount Mr. Shanly will pay £10 per annum in the making of a road on the premises, Mr. Shanly paying the expense of putting in the spring crops, &c., amounting to \$50.62, and that they had made arrangements to dispose of the straw, manure, tools, &c., on the premises.

On motion the reports of the Committees were adopted.

The Board then adjourned, at 1 p. m. for the purpose of receiving the Local Committee.

1 p. m.

The Local Committee met, Sir Allan MacNab in the chair. The Secretary of the

Committee read the minutes, giving a general report of their progress in erecting the buildings and preparing the grounds, and after some conversation in regard to the arrangements the Committee adjourned.

The Board resumed.

The Treasurer submitted a statement of the Receipts and Expenditure of the Board and of the Association for the Financial year ending September 20, 1859. On motion the report was adopted.

At 4 p. m. the Board adjourned to meet the Local Committee on the grounds, for the purpose of observing the progress making in the erection of the buildings, stalls, &c., and spent some time in examining the same.

After returning to the hotel, and having some general conversation with the Local Committee on the details of the preparations, the Board adjourned to Wednesday morning 20th.

HAMILTON, June 20th, 1860.

The Board met at 6 a. m.

Present: The President, Messrs. Denison, Christie, Ferguson, Wade, Beatty.

The minutes of yesterday were read and approved.

The Secretary submitted a letter from Mr. Burnham, regretting his inability to attend the meeting of the Board, in consequence of being obliged to be present at a meeting of the County Council.

Mr. Wetenhall's letter, read yesterday, was taken into consideration, and it was

Resolved,—That the funds of the Hamilton Electoral Division Society of this year be accepted as entitling the members to become members of the Provincial Association, in accordance with resolution of the Board in February, less the sum of thirty dollars debt of the Society from last year, but this allowance is not to be considered as any precedent for the future.

Serjeant Dunbar's letter was then considered, and it was

Resolved,—That the Treasurer be instructed to pay Samuel Dunbar the sum of thirty dollars in full compensation for loss suffered by him by the action of the Corporation of the City of Toronto in turning him out of the house provided for his residence, as caretaker of property belonging to the Association, by this Board.

Mr. Bawbell's letter was then taken up,

and the Secretary was instructed to communicate to him that the Board could not, with their present information upon the case, interfere with the appropriation of the public grant by the County of Peterboro' Society, but that if the Township Society had not received their proper proportion, their best course would be to represent the facts explicitly to the Directors of the County Society, and in case of still not obtaining redress to refer the matter to the Division Court.

Mr. E. A. McNaughton's letter was discussed, and it was

Resolved,—That for the future this Board present medals to those parties who obtain 1st premiums in certain classes, at the Provincial Exhibition, if preferred by them, and that the design and all the details be prepared by a committee appointed to revise the prize list.

Resolved,—That Col. Thomson, Mr. Wade, Mr. Denison, Dr. Beatty, Mr. Pell, and Mr. Edwards, Secretary of the Board of Arts and Manufactures, be a Committee to prepare the Prize List for the approaching Exhibition.

Mr. Hutton's letters in reference to the additional public grant of \$10,000 appropriated by order in Council in aid of the Exhibition, were considered, and it was agreed that as it appeared that one half or more of this amount was to be paid by Government to the local committee, the committee should defray all the expenses of decorations, and that no charges for this purpose will be paid by the Board.

Mr. Stone's letter in reference to the arrangements for the Exhibition was discussed, and referred to the committee on the prize list.

Resolved,—That the thanks of this board be presented to Dr. Rees, of Toronto, for the interesting work on the cultivation and manufacture of Hemp, presented by him to the board.

The subject of appointing Judges for the Exhibition was considered, and the Secretary was instructed to write to the different

County Societies, requesting them to nominate suitable persons, in the same way as had been done last year.

On a communication being submitted from Mr. Hurlburt, of Hamilton, it was

Resolved,—That the committee on the prize list be authorized to offer special prizes for collections representing the Natural History of the Province in Fish, Birds, Wild Animals, Woods and Minerals.

Resolved,—That no visitors to the exhibition be admitted to the grounds on horse back, or in carriages.

Resolved,—That a general superintendent for the exhibition grounds and buildings be appointed by this board, and that the committee on prizes be instructed to submit a detailed plan for the efficient superintendence of the various departments of the exhibition.

Resolved,—That in answer to Mr. Fisher's letter, the Treasurer be authorized to advance the sum of Three Hundred Dollars on the Flax Mill being erected and approved by the committee, out of the special fund appropriated for that purpose.

The Board adjourned at 9 a.m., on invitation of the corporation of the city and the local committee, to visit the new Hamilton City Water Works.

The Board resumed at 2 p.m.

Resolved,—That the Board have been much pleased in witnessing the active progress making in the erection of the buildings, and the preparation of the grounds for the exhibition, and the superior and permanent character of the work. They also desire to record the great gratification they have derived from their visit to the magnificent and costly works for supplying the City of Hamilton with water, not only in the greatest abundance and purity for the use of its inhabitants, but in such quantity, and with such a pressure, as to constitute the most efficient and immediate protection against fires; and they are of opinion that the works reflect the highest credit upon the enterprise and public spirit of the city, upon the talent and ability of the engineers and contractors who executed the work.

After discussing and arranging some other business, principally relating to matters of detail, the Board adjourned.

Editorial Notices, &c.

THE SCIENTIFIC AMERICAN.—This is one of the most interesting and useful publications which comes to our table. It is a weekly publication, devoted to popular science, new inventions, and the whole range of mechanical and manufacturing arts. The *Scientific American* has been published for fifteen years, by the Patent Solicitors, Messrs. Munn & Co., New-York; and has attained, we are informed, nearly 30,000 subscribers, which is good evidence that it is appreciated by the public.

The illustrated descriptions in this paper of the most important improvements in steam and agricultural machinery, commend it to the Engineer and Farmer; the new household inventions and shop tools which are illustrated by engravings and described in its columns, with practical receipts contained in every number, render the work desirable to housekeepers, and very valuable to every mechanic or smith who has a shop for manufacturing new work, or repairing old.

The *Scientific American* is the inventor's advocate and monitor; the repository of American inventions, and the best popular authority on law, and all business connected with Patents. Its Official List of Claims, as issued weekly from the United States Patent Office, in Washington, is published regularly in its columns. The most important Patents issued by the Government are illustrated and described in its pages.

It is the best, the largest and cheapest paper devoted to Science, Mechanics, Manufacturers, and the Useful Arts published in America. Judge Mason, formerly Commissioner of Patents, is engaged with the publishers in their Patent Agency department, and as a writer on Patent Laws and Practice, gives able assistance in the columns of the paper.

The *Scientific American* is published once a week (Saturday,) each number containing 16 pages of Letterpress, and from 10 to 12 original engravings of New Inventions, consisting of the most Improved Tools, Engines, Mills, Agricultural Machinery and Household Utensils. Price \$1 per annum.

The new volume commences on the 1st July, and this is therefore a convenient time to sub-

scribe. On remitting \$2 by mail to the publishers, Munn & Co., 37 Park Row, New-York, the person remitting will be entitled to receive the paper one year. The publishers express their willingness to mail a single copy of the paper to such as may wish to see it without charge.

VOLUME OF 1858.—Having printed a large edition of the Journal and Transactions of 1858, and had several hundred copies left on hand, they have been bound in paper covers, by order of the Board, and will shortly be distributed to the Secretaries of Agricultural Societies, several copies to each, gratuitously, for the use of their respective societies, and to serve as specimen copies, although the work has been greatly improved since that volume was published. When the Secretaries of Societies therefore receive their copies, they will please understand from this, the occasion of their being sent.

OUR NUMBER FOR JULY.—We have commenced the half year with an enlargement of the size of the column, by which the amount of intelligence will be considerably increased. The price for the 12 months from the 1st July to the end of the year, which will alone form a good sized volume of 384 pages, will be only quarter of a dollar, and one extra copy will be given as a bonus with every eight copies ordered and paid for in advance. We trust that a great many farmers who have not yet taken the *Agriculturist*, will be induced to invest the sum of twenty-five cents in giving it a trial, by way of experiment, for the remainder of the year. We can also furnish the back numbers from the 15th May at 30 cents per copy to the end of the year.

TO SECRETARIES OF SOCIETIES.—We make use for this number of our list of officers of this year in sending the free copies. Should any gentleman therefore receive a copy who has not heretofore been in receipt of it, he will understand the reason.

TO TREASURERS OF COUNTY SOCIETIES.—There are still a good many affidavits of the amount of subscriptions of Societies to be received. They should be forwarded immediately. We have received several letters enquiring what the

amount of the public grant will be this year. Our correspondents will find this question answered in previous numbers of the *Agriculturist*. The amount will be the full sum to which each Society is entitled under the Act 20 Vic., cap. 23.

Market Intelligence.

TORONTO MARKETS.

Toronto, June 30, 1860.

FALL WHEAT—\$1 30 a \$1 40.
 SPRING WHEAT—\$1 10 a \$1 14.
 OATS—31c a 33c.
 PEAS—58c a 60c.
 BARLEY—50c a 53c.
 FLOUR.—Superfine, No. 1, \$5 20 a \$5 30; fancy (Spring wheat) \$5 45 a \$5 55; fancy (Fall wheat) \$5 60 a \$5 75; extra, \$6 a \$6 25; double extra, \$6 30 a \$7.
 OATMEAL—\$4 25 a \$4 50 per bbl.
 CORNMEAL—\$2 50 a \$3 per bbl.
 BRAN—\$12 per ton.
 HAY—\$9 a \$16 per ton.
 STRAW—\$8 a \$7 per ton.
 WOOL—28c per lb.
 POTATOES.—New, \$1 37 per bushel; old, 18c a 25c per bushel.
 BUTTER—11c a 13c per lb.
 EGGS—12c a 13c per doz.
 CHEESE—\$10 a \$11 per 100 lbs.
 BEEF.—First class cattle, \$6 per 100; 2nd do \$5 a \$5 25.
 SHEEP—\$3 50 a \$4 00 each.
 LAMBS—\$1 75 a \$2 each.
 CALVES—\$4 a \$6.
 PORK.—Little offered—\$6 per 100.
 HIDES—\$5 50 per 100; Tallow, \$7 50 per 100;
 Calf Skins, 10c per lb.; Lamb and Sheep-skins, 30c each.

BRITISH MARKETS.

(Per Steamer *Anglo Saxon*.)

LIVERPOOL, June 20, 1860.

Flour dull but steady. Wheat dull, prices easier—red 10s 8d to 11s; white 11s to 12s 9d. Corn very dull; sales of mixed 30s; yellow 32s 6d; white 34s to 35s. Pork quiet. Lard firm at 57s to 57s 6d. Sugar quiet. Coffee dull. Ashes dull, pots 29s.

CLEANLINESS.—Compare the dirtiness of the water in which you have washed when it is cold without soap, cold with soap, hot with soap. You will find the first has hardly removed any dirt at all, the second a little more, and the third a great deal more. But hold your hand over a cup of hot water for a minute or two and then, by merely rubbing with the fingers, you will bring off flakes of dirt or dirty skin. And a vapor bath you may peel your whole self clean in this way. What I mean is, that by simply washing or sponging with water you do not really clean your skin. Take a rough towel and dip one corner in very hot water,—if a little spirit be added to it, it will be more effective—and then rub as if you were rubbing the towel into your skin with your fingers. The dirt flakes which will come off will convince you that you were not clean before, however much soap and water you may have used. The flakes are what require moving. And you may keep yourself cleaner with a tumblerful of water and a rough towel and rubbing, than with a whole apparatus of bath, and soap, and sponge without rubbing. It is quite nonsense to think that anybody need be dirty. Patients have been kept as clean by these means on a long voyage and when a basinful of water could not be afforded, and when they could not be moved out of their berths, as if all the appurtenances of a bath had been at hand. Washing, however, with a large quantity of water, has quite other effects than those of mere cleanliness. The skin absorbs the water, and becomes softer and more insensible. To wash with soap and soft water is therefore, desirable from other points of view than that of cleanliness.—*Ibid.*

AYRSHIRE CATTLE—Patrick R. Wright, Esq., Cobourg, C. W., breeder of Ayrshire Cattle, Sheep, &c., has several young Bulls and Heifers for sale. His herd is well known as one of the best in Canada West, and his terms of sale liberal.

Full Pedigree of all animals—U. C. S. Register.

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For the half year commencing 1st July the price will be 15 cents. Nine copies for \$2.