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CANADIAN AGRICULTURAL JOURNAL.

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No 4.

IMPORTANCE OF AGRICULTURE.

It is impossible that any subject in the whole compass of human affairs can be of more importance to mankind than agriculture; which must produce the means of food and clothing for a thousand millions of human beings who inhabit this earth, and who must at once cease to exist, if this produce was not regularly supplied for them. What is the value of any other occupation of man compared to this? Trifling indeed—except so far as they assist, and are necessary to agriculture. Other occupations would not be necessary, and could have no existence, unless supported by agriculture. Let us suppose for a moment, a city of merchants, manufacturers, and members of the learned professions, surrounded by a wall that would cut them off from all communication with the inhabitants of the country; how long could they continue to exist? And what would be the value of their learning, manufactures, or merchandize, when they had no customers except themselves? We leave those who neglect and despise agriculture to reply to these questions, though we know perfectly well what the consequence must be. We do not advance this proposition from any desire to lessen these occupations in the respect and estimation in which they deserve to be held by civilized communities; but we wish to convince, if possible, all who read our journal, that the importance of agriculture to the world generally, and to Canada in particular, is vastly greater than any other occupation in which man is employed. It would appear that it is only in Canada that a wrong estimate is made of the importance of agriculture. In every other country, the first in rank, wealth, and power, feel a most lively interest in the advancement of the improvement and prosperity of agriculture, and do all in their power to promote this prosperity. Here it is exactly the contrary. During our long residence in Canada, we have never seen, with a few exceptions, agricultural meetings at Montreal, attended by the leading

men in wealth, influence, or politics, or take any part whatever in the matter. It was from our knowledge of this, that we have constantly urged the necessity of a Board of Agriculture, to act for the general advantage of the Province; and to see that the public money, appropriated for the improvement of agriculture, should be applied to that purpose, to produce improvement where it was most required. If all the leading men in Montreal, both in office, and out of office, were to interest themselves in this most important matter, there would be no necessity for a General Board of Agriculture, as they might answer all the purposes to this country, that the Royal English Agricultural Society does in England. The chief cause of the general apathy here, towards agriculture, amongst the wealthy and educated classes, is, that they appear never to have considered, or allowed themselves to believe, that it is agriculture that must furnish revenue, and the means of wealth for every man in the country, who has not an income from some other country. The means of subsistence, of wealth, and of revenue in this country, can never exceed in amount the value of the annual productions of Canada—except that which may be gained by the carrying trade, and the expenditure of the British government here. It is on these grounds that we advocate the necessity and expediency of all classes in the country uniting heart and hand, in promoting the improvement of agriculture, so that its products may be augmented in quantity and value to the uttermost, that they are capable of. We would be delighted to see trade and manufactures in the most prosperous condition here, *as the effect* of a prosperous agriculture; because we are convinced that there is no other basis upon which the permanent prosperity of trade and manufactures can be built. Trade and manufactures must be the effect, and be supported by agriculture, or could not exist. It is the products of agriculture that must set both in motion; though agriculturists may be subsequently sup-

plied with what they require from commerce and manufactures. The agriculturist concludes that the division of labour would be advantageous, and resolves to buy his clothes and implements, rather than make them, and thus gives employment to the manufacturer. He also wishes to dispose of some of his own products, and purchase those of other countries; and hence buys from and sells to the merchant. In every way that we examine this subject, we find that it is the products of the soil that must first set in motion every ship that swims, and every manufactory on earth; and without the products of agriculture, no trade or manufactures could have employment or existence.

We have thus endeavoured to submit to our readers the plain state of the matter, not with a view to injure any interest or class, but to induce those who have the power and means to apply some part of this power and means towards an object that is of the first importance to themselves, and to the whole community. As we have already said, an occupation which affords and provides food and clothing for one thousand millions of human beings, or the whole family of man, is not one that should be made secondary to any other occupation; and particularly as we know that there is no other means on earth for supplying these necessities of existence, except from this alone. It is, therefore, most surprising that interests of such importance would not obtain due attention.

In conclusion, we would respectfully solicit the attention of the Legislature to this most important of all subjects that will come under their consideration. They are the representatives of an agricultural population; and it may be presumed that they have made themselves perfectly acquainted with the wants, if not with the wishes, of their constituents, and of the country generally. If such is the case, the backward state of agriculture and the necessity that exists for its improvement, must be well understood by the Legislature. They will also be able to ascertain how far the public money appropriated last Session, for the improvement of agriculture, has answered the purpose; or whether it should have been differently and more judiciously applied to produce a good that is so desirable. We have so often expressed our humble views on this subject, that it is not necessary to repeat them. We may, however, be permitted to say, that the ap-

propriations made by the Legislature, last Session, or any previous Session, has not been productive of that improvement in husbandry which it might have produced if differently applied. To instruct and encourage the ignorant farmer to adopt a better and more profitable system of agriculture, is what we humbly conceive to be most required, at least in Eastern Canada;—and any appropriation made for the improvement of agriculture in that section of the Province, that will not provide for this instruction and encouragement, will fail in the object that is most desired by all true and liberal friends of the Canadian population. Immense good might be produced by a judicious application of the funds granted by the Legislature, if applied to instruct and encourage the ignorant, instead of rewarding the wealthy, and well instructed. The improvement of the soil, the crops, and the pasturage, should precede all attempts to effect any great change in the stock of the country;—because, unless the soil, crops, and pasturage is first improved—we say, without hesitation, that a permanent and profitable improvement in the stock is impossible.

We copy the following extract from an address delivered by a gentleman in the United States, at an Agricultural meeting, and published in the *Maine Farmer*. This gentleman points to England as an example to other countries, in her efforts to forward Agricultural improvement. There is a gentleman now in England, sent from the United States to report the state of Agriculture, and his report is most valuable.

Go into an agricultural community, and you usually find them fond of truth, moral and correct in their deportment, lovers of home, not avaricious, but satisfied with what they have; strong in their love of country, regardful of the rights of others, and scrupulously requiring their own to be respected. You find them a quiet, unoffending people—the advocates of just and equal laws; fond of stability, preferring to light their paths onward by the reflection of experience, rather than to be guided by the uncertain and showy promises of experiment. They mind the production of things; the creation of means—he is a utilitarian in all his efforts—the superfluities of life he leaves for others to furnish. He wields and directs the great arm of labour, upon which commerce and manufactures rely for their support. Such is a brief epitome of the character of an Agricultural people.

In order to produce National greatness, wealth, and population, there must be a joint action, and mutual assistance in the three great departments of business, Agriculture, Commerce and Manufactures. But in this association agriculture must take the lead: she is the mother that brings into existence, and fosters her twin daughters, Commerce and Manufactures. It is Agriculture that furnishes the raw material; that feeds the artisan and laborer, that loads the vessel, that furnishes the cotton and wool which supplies the manufactory. It is agriculture that builds the city, and establishes the mart of busi-

ness, whereat to deposit the rich productions of her thousand hills and dales, flocks and herds, for sale and distribution. No nation can long exist and sustain an importance, unless it has a great agricultural interest to throw itself back upon. Commerce may cease, and yet man may survive; but let agriculture cease to yield its support, and man dies. It is the true policy of every Government to encourage its agricultural interest; for that is the great stimulus that puts in circulation all its other resources.

We see that all the old and strong Governments on the Eastern continent, look most carefully after their agricultural interest. See what England has done to improve the agriculture of her island and its dependencies. She has called into her aid the mighty intellect of her men of science; her philosophers, chemists, geologists, and botanists, and by honors and rewards worthy of the object to be attained, she has enlisted their warmest interest in the subject. They have labored hard and successfully; and by the aid of their experiments and analyses they have opened the secrets of nature, and made examinations into her most abstruse parts. Agriculture, by their efforts, has become reduced to a science. By the aid of that class of men we have been shown the basis of vegetables, and the necessary constituents in soils, to produce those vegetables. By experience we have been taught the value of barn-manure in the rearing of vegetables. But Sir Humphrey Davy taught us what there was in manure that aided vegetation; and how we could form composts, possessing all the valuable principles of the barn-manure, in any quantity, and at trifling expense. These men by taking vegetables and separating and decomposing them, have ascertained of what kinds of earth and material the vegetable is composed. By passing soils through the same process, they have ascertained what soils is the best adapted to the rearing of particular vegetables. By examining and carrying through this process, exhausted and worn-out soils, they have detected at once the part defective, and what is necessary to be applied to restore the soil to its native excellence.

England has found it necessary to increase every portion of her soil to the highest degree of fertility, to give support to her immense population; and every effort has been resorted to, to learn how to produce the greatest crop with the least expense. She has also considered it for her interest, and as her duty, to improve all the several breeds of animals that can be made useful to the support and convenience of man; and the whole energies of the Government have been brought in aid of this noble object. Her navy and foreign commerce; her ambassadors and all her foreign agents have been charged with the great purpose of searching out every thing rare and valuable that will prove the agricultural wealth of her island. The best of all kinds of animals and vegetables, are collected and sent home to be examined and experimented upon. By this course, of every thing that can be made advantageous, they at once seize upon the benefit. By cross-breeding different species, they have succeeded in carrying to the highest degree of perfection the different races of animals in use. All our best blood-cattle, horses, sheep, swine, and poultry, have been imported from that country. Nothing is left undone; no exertion unemployed that will go to benefit her agriculture. She even employs many of her vessels in transporting home the materials to form manures. The isles of the ocean are dug away to furnish her with the Guano, a very popular manure, that has recently come into notice and use. And the *relics and bones* that could be collected on her famous battle ground, Waterloo, were long since transported there, and ground up to mix with and enrich the soil of England.

Throughout the whole of Europe, this same feeling, to a greater or less extent prevails. To renew, stimulate, and vivify the soil, is the object of first importance among that people. The consequence is, that by such attention, the northerly portions of that country, which we should have supposed condemned by nature to eternal sterility, from its latitude, and the coldness of the climate, are made very fruitful in the produce of food. Experience has

shown us that the effect of acclimation, and the application of science and art to vegetables in hastening them to maturity is most wonderful; and it is now a well accredited fact, that agriculture, aided by the modern discoveries of chemistry, can be profitably pursued in high frosty latitudes. A day in Iceland, during the summer, is almost equal to a week at the equator, for the purpose of hastening vegetation.

China is also a wonderful nation. She is original and peculiar to all things. She is one of the oldest and most populous nations of the globe, and has to show the accumulated improvements and wealth of untold centuries. Her vast population, which is supported mostly from the productions of her own soil, numbers about 300 millions. The territory she improves, from which to support her vast number is but little more than half the present size of the United States. But every portion of that territory is made a garden, in the neatness and care of its cultivation. No spot, however rocky or sterile by nature, is permitted to lay idle. The whole is tilled to the very hill top. Every square and rod of land is made to support its man. This is effected by the untiring labor of her population.— Every particle of earth is removed, and re-removed, and exposed to the sun's rays of light and heat, and to the atmospheric changes. Every stone and pebble is removed; nothing but pulverized soil is brought in contact with the vegetable. Every thing in the animal, vegetable, or mineral kingdom, that can be converted into manure is returned back to the soil to enable it to sustain so prolific a production of vegetables. By agriculture, China has made herself, in addition to supporting her great population, the most wealthy nation in the world. She sells annually to the United States and Great Britain the vast quantity of 60 million lbs. of Tea, besides large quantities to other nations. She sells chiefly for cash, and nothing is called cash with her, but the pure metals, gold and silver.

LETTER FROM FRANCE ON AGRICULTURE, &c.

Paris, Dec. 25, 1845.

Agriculture is very differently treated in this country to what it is in England. There is a minister expressly charged with the management of the business arising from it. The Chambers protect it, and assist it as far as they possibly can, without injury to the general weal; and when any particular measure affecting its interests is to be considered, some of the most eminent and enlightened agriculturists of the kingdom are called together, and their advice and opinions demanded. At this very moment, for example, a council, consisting of such persons, is assembled to deliberate on questions relating to irrigation, pasturage, agricultural credit, and other subjects of great importance to agriculturists. Besides this, committees are permanently established in every department, for the encouragement of agriculture, for improving the breed of cattle, and for rewarding meritorious persons: schools are opened for the diffusion of agricultural knowledge; roads are established in all directions where they are likely to be useful to farmers; in a word, agriculture is felt to be the great interest of the country, and is cared for and nurtured accordingly.

I had designed to notice in detail the various questions on agricultural matters submitted by the Minister of Agriculture and Commerce to the Councils-general now sitting, as well as to lay before you a brief abstract of the various documents prepared by the minister to assist the councils in arriving at a sound decision; but on reflection, I think it will be better to postpone doing so until the debate of the councils, with the results they arrive at, shall be published; that they will be of very great interest to your readers cannot be doubted.

The most important question of all which the minister has desired advice upon is relating to irrigation. A law was passed in the last session to provide for the watering of dry lands, by enabling the possessors of them to bring water on certain conditions across the lands of other people. The minister, not thinking the law so perfect as it

should be, wished therefore to learn from the councils whether it should not be extended, and if the power should not be given so as to enable irrigation to be undertaken in cases even where proprietors of lands may not think it necessary.

Agricultural credit is also a very grave question. In France the subdivision of land is carried out to a most surprising extent; almost every peasant has his own little patch, and there is no such class as that of our powerful, wealthy, intelligent, and enterprising "tenant farmers." The subdivision of land prevents great capital from being employed in large sums on agriculture; this creates poverty, and poverty renders the means of procuring money difficult, and the rate at which it is to be had dear. The establishment, then, of some institution for advancing, on moderate terms, capital to farmers, would, with the modification of the present mortgage laws, be very beneficial; even the latter measure alone would be most useful.

A royal ordinance inserted in the *Moniteur* of Tunes, contains provisions relative to the ports and custom houses at which importation and exportation of grain and flour is permitted. In the department of La Haute Garonne, Fos, Bagnères, and St. Mamet are permitted exportation and importation; St. Beat, exportation only. In the departments of the Hautes Pyrenées, Arrea Vielle, Luz, and Argelès are permitted exportation only; Genost, Arragnonet, Gavarnic, Canterets, and Arren, both exportation and importation.

In the Paris markets yesterday the arrivals of flour were 900 quintaux, the sales 902, and the stock remaining on hand 54, 125; the average price of the day was 41 fr. 74 c. Hay was 51 fr. the 500 kilogrammes to 52 fr. at another market; wheat straw was 30 fr., 28 fr. and 29 fr.

The talk of repeal of the English corn-laws excites very great interest in this country; few people, however appear to think that, even if it be carried, it will have any great effect on the French markets; still it would certainly effect, though perhaps not to a great extent, the French corn market. Its political aspect is what chiefly captivates the newspaper writers, and on that they talk glibly enough; some argue that if it be carried it will ruin the aristocracy; and others, if it be not carried, there will be a revolution in England.

From the provinces the accounts are, upon the whole, favourable with respect to the growing corn. It was feared that the long-continued and very heavy rains we have had might have rotted the seed, &c.; but I am informed by a farmer of this neighbourhood, who has made examination into fields for the purpose, that he has detected nothing of the kind; and in country letters no mention is made of it. In the Bass Normandie, in particular, the young corn is said to have a most healthy and vigorous appearance. The weather appears to have undergone a change for the better, yesterday and to-day having been fine and dry.

A method, new in this country, at least, has been used for destroying grubs and other destructive ground insects: it is the dispersing of lime-dust, early in the morning, over the fields; and it has been attended with wonderful success, thousands of insects being killed by the dust.

[The practice of using quick-lime for the purpose above mentioned is common in this country.—Ed. M. L. E.]

ARTIFICIAL GUANO.

Our attention has been called to a new manure, this week, which the inventor calls "Cooke's London Guano." The manner in which it is made is at present a secret, but if it can be made at the price the inventor states, viz., £3 per ton, it will certainly be one of the most valuable manures that has ever been seen in this country. We have seen an analysis made of it by Dr. Ryan, of the Royal Polytechnic Institution, which we insert:—

ANALYSIS OF COOKE'S GUANO—ROYAL POLYTECHNIC CHEMICAL SCHOOL, LONDON.

This is to certify that I have examined a specimen of Cooke's Guano, sent by Mr. M. Joscelin Cooke. Its

composition is as follows:—

| | |
|--|------|
| Ammonia..... | 10.0 |
| Uric acid..... | 7.4 |
| Oxalate of ammonia..... | 17.6 |
| Phosphate of lime..... | 16.7 |
| Oxalate of lime..... | 6.1 |
| Sulphate of lime..... | 6.2 |
| Nitrates of soda, potash, and lime.... | 10.0 |
| Silica, alumina, and iron..... | 9.0 |
| Moisture..... | 17.0 |

100.0

The ammoniacal compounds in this article called "Cooke's Guano," are in very unusual quantities: the phosphate of lime exists also in large abundance. Compared with natural guanos it holds an unusually high fertilizing rank.

JOHN RYAN, M. D., L. L. D.
ROBERT LONGBOTTOM, Sec.

309, Regent-street.

And in order that our subscribers may judge of its merits, we insert an analysis of a first-rate sample of Peruvian guano, extracted from Liebig's Chemistry—

ANALYSIS OF A SAMPLE OF PERUVIAN GUANO FROM LIEBIG'S CHEMISTRY.

| | |
|-----------------------------------|------|
| Urate of ammonia..... | 9.0 |
| Oxalate of ammonia..... | 10.6 |
| Oxalate of lime..... | 7.0 |
| Phosphate of ammonia..... | 6.0 |
| Phosphate of ammonia and magnesia | 2.6 |
| Sulphate of potash..... | 5.5 |
| Sulphate of soda..... | 3.3 |
| Sal ammoniac..... | 4.2 |
| Phosphate of lime..... | 14.3 |
| Clay and sand..... | 4.7 |
| Water and organic matters..... | 32.3 |

Any party examining these will see how superior this London guano is to the foreign, in those essential ingredients which constitute the real value of guano. In the manufacture of artificial manures hitherto it has been the object of the manufacturers to bring their manure as near to the superior qualities of guano as they could; but here we have one actually superior, and that to the best sort imported into this country, viz., the Peruvian. We have seen a sample of it; in appearance it is black and pulverulent, and has a strong and peculiar smell. We are informed it is made from the excrementitious matter, as found in the sewers of London, such as urine, night-soil, and offal, which is treated in a peculiar manner with a cheap chemical agent. The inventor and manufacturer, Mr. M. Joscelin Cooke, has also discovered that the same agent he employs to treat these matters, and form a manure, is also peculiarly applicable to treat the contents of the London sewers; and so instantaneous is its operation on sewer water, which is known to contain a most valuable manure, that the instant it comes in contact with it, it precipitates all the thick and valuable matter out of it, and leaves the supernatant water perfectly clear. Several experiments have been made by him on the sewer water from the different sewers in London, which clearly prove this to be the case. If this can be carried out—and we have seen a plan for it also prepared by the same party—we think we may state that our agricultural friends will find sufficient manure in England, quite equal to guano, without going abroad for it. London is alone supposed to be equal to produce 400,000 tons per annum of this manure; and it can be made in any of the large towns of England. Mr. Cooke expresses himself ready to submit it to any test, and is anxious to get some capitalist to join him in carrying out the invention; he likewise states he can, by the same agent, produce a manure suitable for any soil; but he has one that will do for soils generally, and for all crops.

EFFECTS OF LIME ON THE PRODUCTIONS OF THE SOIL.

It alters the natural produce of the land, by killing some kinds of plants and favouring the growth of others, the seeds of which had before lain dormant. Thus it destroys the plants which are natural to silicious soils and

to moist and marshy places. From the corn-field it extirpates the corn marigold, while, if added in excess, it encourages the red poppy, the yellow cow-wheat, and the yellow rattle, and when it has sunk, favours the growth of the troublesome and deep-rooted coltsfoot.

Similar effects are produced upon the natural grasses. It kills heath, moss, and sour and benty grasses, and brings up a sweet and tender herbage, mixed with white and red clovers, more greedily eaten and more nourishing to the cattle. Indeed all fodder, whether natural or artificial, is said to be sounder and more nourishing when grown upon land to which lime has been abundantly applied. On benty grass the richest animal manure often produces little improvement until a dressing of lime has been laid on.

It is partly in consequence of the change which it thus produces in the nature of the herbage, that the application of quick-lime to old grass-lands, some time before breaking up, is found to be so useful a practice. The coarse grasses being destroyed, tough grass land is opened and softened, and is afterwards more easily worked, while, when turned over by the plough, the sod sooner decays and enriches the soil. It is another advantage of this practice, however, that the lime has time to diffuse itself through the soil, and to induce some of those chemical changes by which the succeeding crops of corn are so greatly benefited.

It improves the quality of almost every cultivated crop. Thus, upon limed land,

The grain of the corn crops has a thinner skin, is heavier, and yields more flour, while this flour is said also to be richer in gluten. On the other hand, these crops, after lime, run less to straw, and are more seldom laid. In wet seasons (in Ayrshire) wheat preserves its healthy appearance, while on unlimed land, of equal quality, it is yellow and sickly. A more marked improvement is said also to be produced both in the quantity and in the quality of the spring-sown than of the winter-sown crops.

Potatoes grown upon all soils are more agreeable to the taste and more mealy after lime has been applied, and this is especially the case on heavy and wet lands, which lie still undrained.

Turnips are often improved both in quantity and in quality when it is laid on in preparing the ground for the seed. It is most efficient, and causes the greatest saving of farm-yard manure where it is applied in the compost form, and where the land is already rich in organic matter of various kinds.

Peas are grown more pleasant to the taste, and are said to be more easily boiled soft. Both beans and peas also yield more grain.

Rape, after a half-liming and manuring, gives extraordinary crops, and the same is the case with the colza, the seed of which is largely raised in France for the oil which it yields.

On flax alone it is said to be injurious, diminishing the strength of the fibre of the stem. Hence, in Belgium, flax is not grown on limed land till seven years after the lime has been applied.

It hastens the maturity of the crop.—It is true of nearly all our cultivated crops, but especially of those of corn, that their full growth is attained more speedily when the land is limed, and that they are ready for the harvest from 10 to 14 days earlier. This is the case even with buck-wheat, which becomes sooner ripe, though it yields no larger a return, when lime is applied to the land on which it is grown.

The liming of the land is the harbinger of health as well as of abundance. It salubrities no less than it enriches the well cultivated district. Where the use of lime and of the drain go together, it is difficult to say how much of the increased healthiness of the district is due to the one improvement, and how much to the other. The lime arrests the noxious effluvia which tend to more or less from every soil at certain seasons of the year, and decomposes them or causes their elements to assume new forms of chemical combination, in which they no longer exert the same injurious influence upon animal life. How beautiful a consequence of skilful agriculture,

that the health of the community should be promoted by the same methods which most largely increase the produce of the land! Can you doubt that the All-Benevolent places this consequence so plainly before you, as a stimulus to further and more general improvement—to the application of other knowledge still to the amelioration of the soil?

AGRICULTURE OF SOUTH AUSTRALIA.

The state of cultivation may be inferred from the following transcript of official and duly accredited statements:—

In 1840 the number of acres cultivated was 24,03; in 1844 the number in cultivation was 26,918. The following estimates in reference to wheat cultivation have been made by one of the leading corn-factors, whose correctness may be vouched for:—

The quantity of land producing wheat crops during the last three years appears from the Government returns to have been—

| | | | | |
|-------|-------------|---|---------------|-----------|
| | Acres. | | Bushels. | |
| 1842 |14,000 | } Producing, at 15 bushels to the acre, | } 210,000 | |
| 1843 |23,000 | | | } 345,000 |
| 1844 |18,980 | | | |
| Total | | | 839,700 | |

The quantity required for home consumption in the three years of 1843, 1844, and 1845, would be.....420,000
For seed during the same period..... 60,000

480,000
Total..... 359,600

The quantity exported up to the end of June 1845..... 203,342

Leaving a gross available overplus of bushels.... 156,357

The estimate of the produce is low, and allows for every kind of waste, crops cut green, fires, and other casualties; and the quantity stated as surplus will, it is believed, be fully borne out.

The cultivation of wheat has rather fallen off, in consequence of the low price obtained. The highest prices for wheat during the last two years have been from 2s. 9d. to 3s. per bushel, though the quality is such as to have produced for it the highest prices in Mark Lane, and in the neighbouring Colonies. A considerable increase has, however, taken place in the cultivation of barley and oats, the former being extensively used in brewing.

The flour mills and manufactories are annually increasing in number, and enlarging their operations. In 1844, such establishments counted fifty-six in all, which comprise 21 flour-mills, of which eight are driven by steam.

The increase of stock has been such that the following authorised data for 1844 have been considered by all well-informed persons much below the real aggregates, namely:—

| | | |
|----------------|-------|---------|
| Sheep | | 450,000 |
| Cattle | | 30,000 |
| Horses | | 2,000 |
| Goats and pigs | | 12,000 |

—Simmond's Colonial Magazine.

THE FARMER.

COMMON DISEASES OF PIGS, AND THEIR REMEDIES.—For the common diseases of pigs, the following recipe may be employed: ½ lb. of sulphur, ½ lb. of madder, ¼ lb. of saltpetre, 2 oz. of black antimony; mix these together, and give a table-spoonful night and morning in its food.

COMMON DISEASES OF HORSES, AND THEIR REMEDIES.—Cough, or Colds, are best treated by cold bran mash, with ½ lb. of linseed, and 1 oz. of saltpetre each mash.

Gripes, or Colic.—In the absence of a veterinary surgeon in this dangerous complaint, the following is the best remedy for a horse:—1½ pint of linseed oil, 1½ oz.

of laudanum, given in a little warm gruel. Some persons assist the operation of the above with a glyster, composed of $\frac{1}{2}$ lb. of Epsom salts, $\frac{1}{2}$ lb. of treacle, dissolved in three quarts of warm water.

Mange.—See Cows, for which the remedy is the same.
Powder Alternative for diseased skin or surfeit; mix together $\frac{1}{2}$ lb. of sulphur, $\frac{1}{2}$ lb. of saltpetre, $\frac{1}{2}$ lb. of black antimony, give a large table-spoonful night and morning in their corn.

Strains and Wounds.—Mix 1 oz. of Goulard's extract, 1 oz. of spirits of turpentine, 1 oz. of spirits of wine, 1 pint of the strongest vinegar; rub this by the hand, or a piece of tow, gently on the part affected.—*Farmer's Encyclopædia.*

THE HOUSEWIFE.

MILK PAINT.—A paint has been used on the Continent with success made from milk and lime, that dries quicker than oil paint, and has no smell. It is made in the following manner. Take fresh curds, and bruise the lumps on a grinding-stone, or in an earthen pan, or mortar, with a spatula or strong spoon. Then put them into a pot with an equal quantity of lime, well slaked with water, to make it just thick enough to be kneaded. Stir this mixture without adding more water, and a white-coloured fluid will soon be obtained, which will serve as a paint. It may be laid on with a brush with as much ease as varnish, and it dries very speedily. It must, however, be used the same day it is made, for if kept till next day it will be too thick: consequently, no more must be mixed up at one time than can be laid on in a day. If any colour be required, any of the ochres, as yellow ochre, or red ochre, or umber, may be mixed with it in any proportion. Prussian blue would be changed by the lime. Two coats of this paint will be sufficient, and when quite dry it may be polished with a piece of woollen cloth, or similar substance, and it will become as bright as varnish. It will only do for inside work; but it will last longer if varnished over with white of egg after it has been polished.

The following receipt for milk paint is given in "Smith's Art of House-painting." Take of skimmed milk nearly two quarts; of fresh slaked lime about six ounces and a half; of linseed oil four ounces, and of whitening three pounds; put the lime into a stone vessel, and pour upon it a sufficient quantity of milk, to form a mixture resembling thin cream; then add the oil, a little at a time, stirring it with a small spatula; the remaining milk is then to be added, and lastly the whitening. The milk must on no account be sour. Slake the lime by dipping the pieces in water, out of which it is to be immediately taken, and left to slake in the air. For fine white paint the oil of caraway is best, because colourless; but with ochres the commonest oils may be used. The oil, when mixed with the milk and lime, entirely disappears, and is totally dissolved by the lime, forming a calcareous soap. The whitening or ochre is to be gently crumbled on the surface of the fluid, which it gradually imbibes, and at last sinks: at this period it must be well stirred in. This paint may be coloured like distemper or size-colour, with levigated charcoal, yellow ochre, &c., and used in the same manner. The quantity here prescribed is sufficient to cover twenty-seven square yards with the first coat, and it will cost about three-halpence a yard. The same paint will do for out-door work by the addition of two ounces of slaked lime, two ounces of linseed oil, and two ounces of white Burgundy pitch: the pitch to be melted in a gentle heat with the oil, and then added to the smooth mixture of the milk and lime. In cold weather it must be mixed warm, to facilitate its incorporation with the milk.

VENTILATION.—Good ventilation is nowhere more important, although nowhere more neglected, than in our bed-chambers. The bad effect of sleeping in small and close rooms has been often mentioned; to which we may likewise add, that of having thick curtains drawn close round the bed, which confine the air that has been exhaled, surrounding us with an impure atmosphere. Provision should be made for a continual change of air in the

apartment during the night, by the escape of the heated and foul air, and the introduction of cool and fresh air. The first may be effected by some aperture at the top of the room; perhaps keeping the top sash open for about an inch may be sufficient: of course, care must be taken that the fresh air brought in at the lower part of the room does not act as a draught striking upon the bed, but that it enters by small apertures, and diffuses itself as quickly as possible; and likewise that there may be the means of regulating the quantity according to circumstances. If the temperature of the fresh air can be regulated, it will be better.

A little apparatus for ventilating a bed-chamber in the night, invented by the Marquis de Chabannes, though not very effectual for a large room, is perhaps worth mentioning for a small one. It consists of a little box, or enclosure of tin or other metal, having an opening in front, in which may be placed a small lamp. The upper part or flue is to be inserted into the wall on the chimney breast, and is to go quite into the flue of the chimney. The air which the lamp requires for combustion will thus pass into the flue, occasioning fresh air to come into the room to supply its place. This machine is, in fact, a little chimney, in which the lamp is the fire. It should be placed near the top of the room.

It is highly deserving of attention, that although we never use fires without flues, yet we very absurdly have long continued to burn lamps of considerable size, which are, in fact, so many fires, in the middle of our apartments, even when small, without the least attempt to carry off the burnt air which they are constantly generating. No wonder, then, that the air, in such places is often felt to be oppressive: it is, indeed, extremely unwholesome.—*Cyclopædia of Domestic Economy.*

ENGLAND IN 1815 AND 1845; OR A SUFFICIENT AND A CONTRACTED CURRENCY.

By ARCHIBALD ALISON, F.R.S.E. Price 5s. Blackwood and Sons, Edinburgh and London.

TABLE No. 1.

EFFECTS OF A CONTRACTED CURRENCY.

| | Total cash note circulation. | Prices of Wheat. |
|---|------------------------------|------------------|
| | £ | s. d. |
| Average of 6 years, ending with and including 1819, | 44,730,291 | 89 2 |
| Average of 6 years, ending with and including 1825, | 32,111,436 | 69 0 |
| Average of 6 years, ending with and including 1831, | 30,010,039 | 62 2 |
| Average of 12 years, ending with and including 1843, | 28,181,699 | 52 0 |
| Average yearly amount of money applied to the redemption of the national debt, for 10 years, ending 1821, | 15,405,963 | |
| The same for 10 years, ending 1831, | 6,785,218 | |
| The same for 12 years, ending 1843, | 591,657 | |

(EXTRACT AND TABLE No. II.—See p. 126.)

"Even a cursory inspection of the tables in the Appendix must demonstrate to what cause the extreme embarrassment of finances, which appears so extraordinary in the midst of rapidly-growing numbers and industry during the last twenty years, has been owing. If the reader will cast his eye over the columns showing the annual amount of the poor-rate, taxes, and national debt converted into quarters of grain since 1815, he will at once see the solution of the whole. He will readily perceive how it has happened that the indirect taxes have ceased to admit of extension; how the sinking fund has disappeared, and recourse has been rendered unavoidable to an income tax, after above a quarter of a century of unbroken European peace. The poor rates as measured in quarters of grain, that is, in the produce of industry,

are four times as heavy as they were at the beginning of the century, and double what they were in 1815. The national debt, measured by the same standard, is a third heavier than it was at the date of the Battle of Waterloo. Fifty millions sterling, between indirect and direct taxes, have been taken off since the close of the war, and only thirteen millions laid on in the same time; yet the present height of taxes is greater than it was at the commencement of that period.* This is the result as measured in quarters of wheat, as measured in the produce of manufactures; and the national burdens of all sorts since 1815 have, notwithstanding these vast, and to the revenue ruinous reductions, been more than doubled. It does not require the gift of prophecy to foresee that such a state of things cannot possibly continue much longer."

* Viz. :—

| | |
|---|--------------|
| Taken off, indirect taxes, from 1815 to 1843, | £ 32,529,339 |
| Taken off in 1845, | 2,468,000 |
| Income tax taken off in 1815, | 15,000,000 |
| | 50,997,339 |
| Laid on in same period, | 13,451,119 |
| | 36,646,220 |

| | 1801. | 1815. | 1843. |
|---|------------|-------------|-------------|
| | £ | £ | £ |
| Taxes as measured in qrs. of wheat at annual prices,..... | 5,330,179 | 19,055,398 | 24,227,668 |
| National debt in do | 69,850,545 | 214,818,931 | 828,965,251 |
| Poor's rate in do... | 693,234 | 1,702,255 | 3,015,147 |

The Canadian Agricultural Journal.

MONTREAL, APRIL 1, 1846.

FREE TRADE.

Any objections we have ever advanced against free trade, was not to the general principle, but to its partial introduction, or to its application to the products of agriculture, and nothing else. There are other articles as well as grain, meat, cheese, and butter, necessary to man; and those who deal in these other articles are ever ready to take advantage, as the supply and demand may happen to give them opportunity, to raise prices, while they are protected from all foreign competition.

The only way that the principle of free trade can be fairly introduced, would be at once, or at the termination of a given period, to make one common law that would put an end to every species of protection that now exists in favour of trade, manufactures, commerce, and shipping, in the British Isles or her Colonies. When this is done, agriculturists will have no complaints to make, and they will be perfectly satisfied to rely upon their own industry and skill to furnish them with what they may require. Though much has been said of the unfair advantage given to agriculture by the Corn-laws, it is our

firm conviction that the advantages were all upon the other side, and in favour of manufactures and commerce; and that it was in consequence of these advantages, that such vast accumulations of capital have been made by manufacturers, merchants, and traders, and chiefly from the productions of agriculture, as the source of all wealth. It would, no doubt, astonish a Manchester, Leeds, or Birmingham manufacturer, were they to be told their wealth was derived from the crops raised upon the lands of England or her Colonies, but it would not be the less true that such was the case. The most beautiful fabrics ever manufactured could have no money value, if the lands were uncultivated, or yielded no produce over what was required by the farmer for his use. It may be very desirable to have cheap bread, but it is as necessary that we should have this small amount to buy it, or we shall not benefit much by hearing of its cheapness. If the products of the soil do not furnish the customer of the manufacturer with means of buying manufactures, what must be done with them; they cannot buy bread with them, however small the price may be. Manufacturers may rest assured their prices must come down to the level of the value of agricultural productions, and their profits be reduced in like proportion. The one must follow the other, as sure as night follows the day. We have seen eggs sold in Ireland for three-pence the dozen, not because the seller did not require them for the subsistence of himself and his family, but because he required the money they brought for a more urgent purpose. Here was a case where abundance could not supply the actual wants of existence; and it would be the same way though bread should be reduced in price one-half, if the individual had not this half price to give for it. It would certainly be an evil if persons had means to buy bread, and there was no bread to be had to purchase—this would be a real evil, and, therefore, it should be the earnest endeavour of every country to provide their own bread. Of course, we consider Canada a province of the British Empire, and included in the country that should provide bread for this Empire. We know that it is the opinion of many that our connexion with Britain is a constant and injurious expense to the people of the British Isles; but we conceive this to be a great mistake, and though British

money and capital may come to this country to pay the troops, and find other employment, we are perfectly sure that it may be as safely invested here as elsewhere, and will as certainly, in one shape or other, find its way back to England in full weight and measure, and running over. This must ever be the case in two countries similarly circumstanced as England and Canada, with regard to each other. Under the present circumstances of our connexion and intercourse, all the art of man cannot prevent the capital that may come out here, very much for the benefit of this country we admit, finding its way home again with full interest; and we do not consider this return home of capital as matter to complain of, because it may have produced the full amount of usefulness we could reasonably have expected from it while employed here, and has only been withdrawn in the natural course of trade and commerce. In the case of private individuals, the power to accumulate wealth increases in proportion generally to its large amount. It is the same with wealthy nations; and, in proof of our proposition, we may refer to England, at present the most wealthy nation that ever existed, notwithstanding the vast amount of what is termed her national debt, and the alledged burdensome expenses of her Colonies, that it is pretended take everything from her without rendering any advantage in return—as great a mistake as it is possible to conceive, because the thing is impossible.

Far from England complaining that Canada is burdensome to her people, her people should be proud of this noble province of her Empire, as we are of our connexion with her; but we must deny that we enjoy any unfair advantage from the United Kingdoms or their people, that would justify complaints of our being burdensome, or that it would be productive of benefit to the mother country to sever the connexion, and cast us off from her for ever. The connexion between this province and the mother country is calculated to afford very great advantages to both countries, if they act towards each other as mother and daughter—one with kindness and encouragement, and the other returning duty and attachment; and we conceive that the duties imposed by this connexion on either party, or the advantages derived from the connexion by either, should not be valued or estimated by pounds, shillings, and pence.

We cannot here enter into details, but we could make up a balance sheet that would, we are confident, show that this country *indirectly* pays her own expenses, if there be any truth in the statements of British manufacturers, who assert that a large proportion of the cost of manufactures consists of direct and indirect taxation. The industry and skill of the British people is, we believe, unequalled; but it must be manifest, nevertheless, that if the numerous colonies of Britain were all burdensome and expensive to her, as it is pretended, she could not support such a constant drain upon her resources.

England is becoming more wealthy and powerful every day, and we rejoice at it, but we shall never admit that Canada is injuriously burdensome to her, but, on the contrary, one of the most useful and valuable provinces of all her vast and wide-spread Colonial Empire.

We stated in our last number that the unsteady, and generally very high rate of freight charged upon Canadian produce exported to the British Isles, acted as a tax or drawback upon the value of this produce that was very injurious to the farmers. It is upon these grounds, that we would say, if there is to be a free and unrestricted importation of foreign agricultural produce into Canada, there should also be a free competition of shipping allowed to carry our exports to the British Isles. We do not understand why freight by the St. Lawrence should be so much higher than from New York. Merchants and shipowners should make a rule, that no ship would be dispatched from Quebec with freight after the 15th of November, and if they did, the dangers of the St. Lawrence would not be much greater than from any other American port. We had many shipwrecks last fall, but it was owing to the very late period of ships leaving Quebec the last days of November. If we are to have free trade in agricultural produce, let us also have it in shipping, and we shall have no more high freights; and thus we would gain perhaps as much in freight as we would lose in price by foreign competition. If the navigation of the St. Lawrence can be rendered less dangerous, by the erection of light-houses, or by any other means; the Legislature will, doubtless, see the great necessity there is for providing a remedy, and diminishing the dangers of the navigation. When we have our canals and

railroads completed, and the necessary improvements to render the St. Lawrence more safe, with as free trade in shipping as in corn, it will greatly diminish the evil of foreign competition in agricultural produce. The principle of free trade is a good one, but unless generally established, it must be unjust. We never should propose a free trade in shipping, if not to show those most anxious for a free trade in corn; how they contrive, by high freights and insurance, to raise the price and value of this corn in British ports. Those who are so anxious for untaxed foreign grain and provisions, under pretence of making provisions cheap, will never effect this, unless there is free permission that these provisions shall be transported to England by the cheapest ships that will be found to carry them. Unless this is done, we shall have higher freights, in consequence of more employment for shipping, where there is free admission for foreign produce. The matter is quite clear, that a large portion of the price of Canadian agricultural produce will be required to pay shipowners exorbitant freights, because they will have a complete monopoly of the carrying trade; and thus the people of England, instead of having untaxed provisions, will have to pay a tax to shipowners, instead of to the government, towards the support of the expenses of the state; this will be a part of the result of partial free trade.

It does not appear that those who complain of the expense and burden that Canada is to the Mother Country, ever think of the amount of British exports to this country. These exports must certainly come to Canada, charged with all the cost of their production, and of course the direct and indirect taxes paid by the producers; this must be the case, or they would not be produced, or continue to be sent here. The purchasers and consumers of these goods in this country must, therefore, pay all the cost of their production, including all the taxes.

In any general system of education that may be introduced into Canada; we trust that provision will be made for the instruction of youth in the science and the practice of agriculture. It is most strange that it should not be considered necessary to give any education to men to fit them for the principle employment of mankind; that employment, in fact, upon which all others de-

pend, as well as the very existence of the human race. If education is necessary to fit men for other occupations and professions; why should it not be more necessary for men who are to be occupied in a business that must be of the first importance in all countries? We believe the cause, that the education of the agricultural class in Canada has been so much neglected in time past, was, there were so very few individuals directly connected with agriculture, who had any thing to do with the government or legislature of the country. It is very easy to understand how pleasing and necessary education may be to those who have that advantage; but it does not always follow, that those who enjoy this great advantage, will feel any great anxiety for the general instruction of their fellow men. We have had ample opportunity of experiencing the little favour that has been bestowed upon agriculture, or those who honestly advocate its interests. Indeed, to advocate these interests in Canada is sure to create a host of enemies. The cause of this must be, of course, that agriculture has not that degree of influence in the country, which it should enjoy for the advantage of the people.

Let useful education be general, and agriculture will find its proper level and station, but until these we have no hope for it. The influence of education is a powerful one, when opposed to those who have not this advantage; and it is only when all classes of a community are equally educated, that each will have their due influence, and justice be done to all. We are not advocates for that sort of education which will teach youth little more than to read and write. We are aware that it would be impossible to give a perfect education to those who have to earn their living by hard labour; but it is perfectly possible to give a sufficient education to a due proportion of every community. A few well educated farmers in a parish would be able to effect a great amount of good, provided their education is what it ought to be. A good education will enable a sensible man to think and act for himself, and for his country advantageously, and we appeal to every true friend of Canada, if it would not be desirable that there should be many well educated farmers in every parish in the province. If education is calculated to make men worse members of society, or disloyal subjects, we might as well burn all the books on earth at once, and not loose any more time or money by them. Let the well edu-

cated man answer this question, as it is he alone that can do so; and if he is a lover of his fellow men, he will not wish to withhold from others a benefit which he finds to afford him so much of true enjoyment, and real advantage; and he will also understand what sort of system of general education would be most suitable to establish.

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In our last we stated that we had seen at the grocery store of Mr. McFarlane, corner of St. Francis Xavier Street, a Canadian-made cheese of very superior quality, which we understood to have been made at the dairy of a Mr. McDonald, of Glengarry or Cornwall. We have, however, since found that the cheese referred to has been made at the dairy of Mr. Daniel Havens, on the farm of T. Louis Macdonald, Esq., of Gananoque, and we are glad to correct the error. We understand that Mr. Havens' dairy at Gananoque has, this last year, which was considered an unprecedented dry season, "turned out upwards of twelve tons of as good, if not better, cheese than the one referred to, and which commands a premium in the English market." So far as we could judge of the quality of cheese, that which we noticed in the last number was of very superior quality and manufacture, and proves what we have so often stated, that cheese and butter, equal to most of what is made in the British Isles, could be manufactured in Canada; and all that is required to ensure this is to have good pasturage, which we may have, suitable dairies, and skillful dairy-maids. If good cheese can be manufactured on one farm, there is no reason why it should not be produced upon another, under the same circumstances of climate and soil; and we are certain that it can by skill and proper management, as there is nothing in the climate or soil of the country to prevent it.

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When the English ports were opened to our cheese, butter, beef and pork, it was supposed by many we would not be able to send any of these articles, with the exception of pork, that would be sufficiently good in quality to sell in British markets. It has been proved, however, that both cheese and butter can be made in Canada, equal at least to any manufactured in North America, and that will find a ready sale and fair price in England. The article of beef may also be produced in Canada of good quality, and fit for ex-

portation, if we only adopt the means that are at our disposal to raise beef. The country would be in a very different condition now, if measures had been taken long ago to improve it, and make the most of the resources at our disposal. It would be infinitely more creditable to us to have done this, and to have the country now producing abundantly, than to be seeking for the productions of other countries. We maintain that Canada is capable of yielding more annual surplus produce than has ever been shipped from her ports in a year; and we are sorry to perceive our own country and resources neglected, and left to waste, while we are anxious to import the produce of other countries. The lands of the adjoining States of the Union are not to be compared, for excellence of quality, to the lands of Canada, neither is the climate superior.

We conceive it to be most culpable of us not to improve our own lands, and increase their production to the uttermost.

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It is computed that there are about one thousand millions of inhabitants living upon the earth, and supported by its annual productions. The ravages of the wheat-fly, and the recent disease of the potatoes, are well calculated to remind man how entirely this countless multitude are dependant for the means of their very existence upon the good providence of their Creator. The wheat and the potatoe afford the principle food of a large portion of the human family, and we have seen in many instances nearly the whole crop of these plants destroyed, not yielding as much as the seed put in the ground, and this destruction produced in the wheat by a very small insect, that lives only for a few days, and to all appearance for this purpose alone; and in the potatoe by a disease which the most skilful cultivator cannot prevent, and which the most learned men on earth have not yet satisfactorily accounted for, or suggested any effectual remedy. These facts prove the helplessness of man to provide and secure the food on which he must depend for life, and are well calculated to show him his weakness and dependence, and to humble his pride and self-confidence. We do not, however, offer these observations to discourage man's exertions, or that reasonable degree of confidence which he should have in the faculties bestowed upon him by his Creator, but we wish to remind him that the most excellent faculties

can effect very little in certain cases. The varieties of wheat that have been successfully cultivated in Canada from its first settlement, if sown now at the usual period, would be almost sure to be destroyed by the wheat-fly, and we neither know the cause of this, or the remedy. Fortunately, an inferior variety of wheat has lately been introduced, that may be sown five or six weeks later than the former variety, and, in consequence, come later into ear, and thus escape the fly, and come to maturity and perfection in about three months from the time of sowing. It is the same case with potatoes,—if cultivated now as they have been for centuries past successfully, they would rot by disease, and be useless as food. It is another remarkable fact, that the richer and more fertile the soil, and luxuriant the crop of either wheat or potatoes, the more liable they become to be destroyed by the fly, or by disease. From our own experience with regard to potatoes, we are convinced that very large crops of this root cannot be successfully raised in future, and that if we desire to check the disease, we must be content with moderate crops, that will not be forced by large quantities of recent manure applied when planting. It may be possible that both these plagues may pass away from the earth, when they accomplish the purpose for which they have been permitted, namely, to show us that the good which supports our life may be taken before our eyes by a minute insect that lives only a few days to accomplish his work of destruction, and by a disease hitherto unknown until very lately, that destroyed a root which formed the principle food of hundreds of millions of the human family.

The month of March, up to the present, has been exceedingly mild for the season, and though at the commencement of the month a considerable depth of snow covered the ground, it thawed rapidly during the day, and in the neighbourhood of Montreal most of the snow is gone, except on the roads, and by fences. There was scarcely any thaw from the beginning of winter until March, so that the snow was unusually light, and readily thawed. During the months of January and February we had considerable cold, but the winter altogether has been very moderate, and the roads good generally, with the exception of their not being kept sufficiently wide to admit double sleighs to pass each other with-

out great difficulty and inconvenience. This defect in the law should be remedied. We have constantly advocated the expediency of the sleigh ordinance, and doing away with the use of the common Canadian train on the public roads, and we have also suggested the necessity that the law should provide that the roads should be made and kept of sufficient width, or double tracks made, to admit of this new description of winter carriages, the double sleigh, to pass each other freely, and without inconvenience. It was fully as necessary that the latter obligation should be provided for in the law as the former. The law in its present form obliges men to keep a description of winter carriages that cannot be made use of conveniently on most of the country roads. The common Canadian train was the only description of vehicle that was fit for use on the narrow tracked country roads, because they could pass each other readily, and without injury, which is impossible with the present description of winter carriages. We have recommended the adoption of rollers upon the roads in winter, instead of the snow-plough, and we are satisfied they would prove to be the best implement for the winter roads. A roller eight feet long, passing twice, would make a track 16 feet wide; and this would be easily accomplished, if commenced at the first fall of snow, and regularly continued after every subsequent fall. The snow-plough, if it must be continued, might have one improvement that is very necessary, that is, to have hinges to the front or point similar to a drill-harrow, that would admit of opening and closing the hinder part, to admit carriages passing it when in use upon the road, which from its present form is almost impossible.

For the last year, and this, we have addressed copies of this Journal to the several members of the Legislature, as the representatives of a constituency chiefly agricultural, and we are happy to say, that only four or five of these copies have been returned to us. As the only Agricultural Journal published in Eastern Canada, we were anxious that our representatives should be acquainted with our humble views on the subject. We do not pretend that those views are correct in every respect, but we do say they were honestly submitted.

The principal object we have in publishing, is to attract the attention of our Legislative and other

wealthy and educated individuals to this subject. We never could expect to be able to effect much good as individuals, unsupported, as we regret to say, we have been. It is very well known that we have expended a large amount by our publications, and it must also be very well known that our object could not have been profit to ourselves. Whatever good our publications have been calculated to produce, we certainly never have received the smallest amount possible of public reward or favour, more than if those publications were of the most vicious and mischievous tendency. This may appear strange in a country whose every hope of prosperity depends upon the produce of her agriculture. If our leading men in politics and society were to take this matter up, we might retire and publish no more on the subject; but this has not yet been done, and we have consequently been induced to persevere. Those who have not given us any support, may form some estimate of the amount of support we have received.

We believe there is abundance of what is known as the Black Sea wheat in Canada now, for seed the next spring; and we would recommend all farmers who have not this variety of wheat, to procure it and sow none other. This wheat we know by experience may be sown from the 21st to the end of May, and perhaps later, and will not be damaged by the fly, or by mildew. It may not be so valuable as other wheat for the miller or baker, but we believe it will make up in quantity for any inferiority in quality, and it is a most fortunate circumstance for the country that we have a variety of wheat that can be grown. We also have been told, that this wheat has been improved in quality by its cultivation in Canada, and it may be more improved yet. Though the sowing of wheat may be put off until the 21st of May, other grain may be sown as soon as the soil is dry—oats and peas in particular; potatoes may also be planted early, and thus the spring work may go on from the moment the soil is in a fit state to work.

THE PRODUCE OF DISEASED POTATOES WILL BE DISEASED.

In the official report on the potato crop, by the late Irish commission, dated Nov. 7, is the following paragraph; "It has also been ascertained by actual experiments that potatoes, though diseased, will grow and produce apparently healthy plants." Nevertheless, the commissioners thought it imprudent to recommend the employment of such potatoes, "except by way of experiment,"

thinking, no doubt, that the evidence in their favour was inconclusive. We greatly regret to state that the event has justified their cautions. We are now in a condition to announce positively that, although diseased potatoes will produce plants which for a few weeks appear to be healthy, yet they will not remain so, and that *diseased sets will perpetuate disease*.

It was stated at the meeting of the Horticultural Society, on Tuesday last, that it had been for some time rumoured that the new potato crop was again attacked in forcing-houses by the old disease: that these rumours had become so frequent as to cause strict inquiry to be made into their truth; and that the result of that inquiry was a *confirmation of the reports alluded to*. Potatoes were produced from Mr. Barnes, gardener to Lady Rolle, at Bicton, in which the disease had manifested itself in a manner not to be mistaken; first, by the appearance of a brown gangrene on the haulm underground and in the neighbourhood of the old tuber, and next by rotting blotches on the leaves. These potatoes had been planted in the autumn. In the month of January, "they were as strongly and evenly above ground as I ever saw a field of potatoes in May," are Mr. Barnes' words. The disease was remarked upon taking up a portion for transplanting to a hotbed for forcing. Of the samples produced to the meeting of the Horticultural Society, one, and much the worst, was the produce of "rather badly affected tubers;" in these the whole of the under-ground haulm was already gangrened and brittle. Another sample, from tubers supposed to have been sound, also manifested the symptoms in putrefying blotches on the leaves, accompanied by the under-ground gangrene.

In addition to this Devonshire evidence, it was mentioned that plants in the garden of the Horticultural Society, examined the previous afternoon, were found in the same state, under-ground haulm having already begun to decay in blotches. It was added that these plants were also obtained from diseased tubers, planted for the express purpose of watching the progress of growth. No trace of fungi could in their instance be discovered on the decaying spaces after the most careful examination of some hours' duration; but a white mouldiness had manifested itself on the stems sent up from Bicton.

But this is not all. Upon examining more carefully the young potatoes formed by the diseased sets, we found still further evidence of latent mischief. Some of Mr. Barnes' potatoes had formed tubers and roots without haulm or foliage; they were what are called Cornwall "Bobbin joans." In one of these the brown colour on the walls of the cells, the earliest symptom of disease, was already appearing in numerous minute places, in the very centre of the young potato, [this potato became black after twenty-four hours' exposure to air]; others were decaying on the surface, and one of them had already rotted away. We now, therefore, warn the public that *diseased sets will produce a diseased crop*. Not a shadow of doubt remains upon that point.

But unfortunately this intricate question is not settled by such an announcement. On the contrary, a far more serious consideration remains behind. Can we regard the sound (?) potatoes saved from the diseased fields of last year as fit for seed? It may be rash to venture upon any prediction concerning so wholly unknown a subject; but nevertheless the interests involved in this question are so mighty, that we must be content to bear the reproaches which may be poured upon us if we hazard an opinion which the result may not confirm. We venture, then, to declare thus early, that *great doubts exist as to the fitness for seeds of apparently sound potatoes from diseased districts*. That the remaining potatoes of last year's crop are in an unusual condition is certain; they are more excitable; they will sprout much quicker than is customary. At this early period potatoes are found in a state of advanced growth when the pits are opened; and this has taken place much beyond what can be ascribed to the peculiar mildness of the season. In fact, the old tubers of last autumn began to grow in a few weeks after they became ripe, or what seemed so; an event unknown in previous potato culture. Why this is we know not, nor shall

we embarrass ourselves with inquiring whether it is owing to this or that chemical peculiarity. It may be very true that the potatoes have formed unstable *casein* instead of stable *albumen*; or some other explanation may be more correct. For us it is enough to know that the *vitality of the potato is affected*. The living principle is changed; of that no doubt can exist; and such being the case, it is much to be feared that the disease of last year will continue to appear until, or except where the original constitution of the potato is recovered.

But we would not sound a note of alarm upon mere speculations. We grieve to announce that we have now before us evidence that confirms the view we have ventured to take. Among the *Bicton* potatoes above alluded to, was one which the most practised eye would, we think, have pronounced sound; its skin was clear, its texture uniformly pale yellow, with no tendency to change colour when exposed to the air, and its surface had not a blemish, with the exception of a small very narrow short streak on one side, which seem to have been the scratch of a fork. This potato pushed vigorously; its main stem is half an inch in diameter; it must have shown all the symptoms of the most robust health; and yet gangrene has attacked the haulm just above the tuber, and the usual blotchings have appeared upon the leaves. This potato plant is unequivocally diseased.

We will suppose that some trace of disease could have been found in this potato, by cutting it into thin slices, though we have failed to discover them by that process. Admitting this, yet it is perfectly clear that if healthy potatoes can only be discovered by such a process, the crop of next season is doomed, wherever sets from diseased fields are employed.

We therefore warn the country, in the most emphatic language that words are capable of conveying, to think well of what is coming; to plant no potatoes to which suspicion attaches; and, if sets from uninfected districts cannot be procured, to crop their land with something else. There can now be no doubt that in the absence of such precautions there is no security for the potato crop of 1846.

[Since writing the above, we have received confirmation of our worst fears. Mr. Errington, gardener to Sir Philip Egerton, at Oulton, in Cheshire, writes that in a garden near him, "the early kidney potatoes in frames are totally destroyed." He adds that he "saw the frames last week, and the stems had mortified from the leaves downwards, exactly as they did in the open fields, last September."

Mr. James Cuthill, of Camberwell, informs us that Mr. Hale, a market-gardener at Ware, in Hertfordshire, has had his early potatoes attacked with last year's disease; that "half his crop, amounting to about 60 lights, is gone;" that the plants "were looking well, and about 8 inches high, and all at once they were attacked." Mr. Hale, florist, Stockwell, saw these potatoes, and authorises Mr. Cuthill to say so; the owner was dusting them with lime.

We have received a sample of potatoes from Mr. Milburn, of Thropfield, near Thrisik, just taken out of the pits, and "quite sound as far as he can judge," in which indeed there is not the smallest outward sign of decay, and yet we find every one marked with the disease upon cutting into them. We are also informed that the forced potatoes at Col. Wyndham's, at Petworth, have proved to be diseased, although great care was taken in picking out what appeared to be sound sets. Of this last case, however, we have no certain knowledge as yet. — *Gardeners' Chronicle*

ON POTATOES.

Sir,—If you think the enclosed statement will be of any use, you are at liberty to do as you will with it. I wish a series of accurate experiments could be instituted on various soils; thus in a few years certainty would take the place of supposition. I would premise by stating that my farm is in Lincoln Heath, soil of good quality, on a limestone subsoil. The rows were 2 feet and a trifle

(not an inch) asunder. The potatoes were set 1 foot apart. The red potatoes (French) had been grown for some years on similar land; the white ones (Captain Hart's) were fresh seed from a distance of some miles.

I weighed many roots of each sort, but give the average weight of twelve roots—

| No. | Number of Roots. | | Number of Potatoes | | Number of Potatoes | | Number of Potatoes | | Total Weight. | |
|-----|------------------|-------|--------------------|-------|--------------------|-------|--------------------|-------|---------------|--------|
| | red. | whit. | red. | whit. | red. | whit. | red. | whit. | red. | white. |
| 1 | 12 | 12 | 62 | 63 | 45 | 39 | 37 | 24 | 11 lb. 14 oz. | 12 6 |
| 2 | 12 | 12 | 69 | 60 | 52 | 48 | 16 | 12 | 11 2 | 12 1/2 |
| 3 | 12 | 12 | 68 | 48 | 36 | 33 | 33 | 15 | 8 11 | 9 6 |
| 4 | 12 | 12 | 63 | 69 | 44 | 45 | 9 | 24 | 9 6 | 11 15 |
| 5 | 12 | 12 | 58 | | 40 | | 13 | | 9 1/2 | |
| 6 | 12 | 12 | 62 | | 33 | | 21 | | 10 6 | |
| 7 | 12 | 12 | 53 | | 34 | | 19 | | 7 14 | |
| 8 | 12 | 12 | 65 | | 64 | | 11 | | 7 9/8 | |

How manured:—

- Lime and salt 70 strikes per acre, 2 strikes of lime to 1 strike of salt. It had been mixed several months. It was put on very accurately.
- Nothing whatever.
- Soot and salt mixed, 2 parts soot, 1 part salt; 35 strikes per acre.
- Fresh soot; 35 strikes per acre.
- Well manured with rich oil-cake manure made by sheep.
- Heavily dressed with a compost of twitch sods, rotted by the application of quicklime, the layers of each being watered with strong brine as the compost hill was made.
- Heavily dressed with a compost like the last, excepting the brine.
- Guano, 17 ounces on 18 yards in length on the drill, i.e., 4 cwt. per acre.

It will be seen that the diseased white potatoes were as 1 in 2½, and that numbers 1, 2, 3, and 4, the diseased red ones, were as 1 in 1½. Whether the comparative results here given are the effect of the season, or whether they will prove generally correct, further experience alone can tell. In picking twelve roots which were as wide apart as any I could find over the variously manured pieces, I found 79 potatoes, weighing 10 lb. 6 oz.; in picking twelve roots as close together as I could, I found 68 potatoes, 9 lb. 12 oz.

CAUTION.—DISEASED POTATOES.—Our attention has been called to a circumstance which may be of service to those who are employed at the potato mills among the diseased potatoes. Two men belonging to the town, employed some weeks among the potatoes preparing for the new mill at Friartown, happened to get, one a thumb, and the other a finger, slightly scratched, but so trifling were the wounds, that they paid no attention to them, and continued at their work for two or three days after. The injuries, however, continued to increase in severity, the limbs having become dreadfully swollen and painful, they were obliged to drop work. The swelling, accompanied with the most severe inflammation, continued to increase, extending along the hand and up the arm; and to such a state has it reached, that at the present time it is doubtful whether both the workmen may not require amputation of their arms to be performed. A boy, about eight years of age, while engaged in grating diseased potatoes, about five weeks ago, to make weavers dressing, got a finger scratched upon the grater, and is also in a state of suffering similar to that mentioned. This leads to the belief, that there must be some highly poisonous quality in the potatoes, of which it would be well for those who work among them with broken skin to be aware.—*Perth Courier*.

CONSUMPTION OF GUANO IN ENGLAND.

One hundred and thirty-seven thousand and three hundred tons of Guano were consumed in this country between the 1st of July, 1844, and the 1st of July, 1845.

Of this quantity, Africa supplied us with about 160,000 tons, and South America with the remainder. The cost price to the farmer of this manure, may be estimated as follows—

| | |
|---|----------|
| 100,000 tons African, at 8 <i>l.</i> per ton | £800,000 |
| 37,300 tons Peruvian, at 12 <i>l.</i> per ton | 447,600 |

| | |
|------------------------|------------|
| Making a total cost of | £1,247,600 |
|------------------------|------------|

A million and a quarter of money spent by British farmers in a fertiliser which was unknown in practice five years ago, is an *astounding fact*, and one which is pregnant with interesting considerations. Thus, in the first place, it is a direct and practical refutation of the libel so industriously asserted by some, and blindly believed by others, that the farmers of England are "as stubborn as the clays they cultivate," and are unwilling to adopt modern ideas for the improvement of their practice, and the increase of their produce. There are, doubtless, some who are even yet ignorant of the value of this fertiliser; but the fact of the great consumption, to which we have alluded, proves that the case is not "few and far between," in which the farmer has been neither dull of conviction nor tardy in action.

A demand increasing in four years from nothing to 130,000 tons, is evidence enough that there are some apt scholars amongst us. In like manner, it is an answer to the open enemies and lukewarm friends who doubt the utility of our agricultural societies, and who sneer at the efforts of all who labour with their pens or their voices to stimulate the mind of the farmer to enquiry, and to diffuse, over the length and breadth of the land, the principles of the science and the practice of an art upon which so much depends, and comparatively so little is known.

For if we grant that some few persons directly interested in the cultivation of the soil knew the utility of the manure on its first importation, and that analysis pointed out to others *why* and *wherefore* of the fact, how is it that this fact is new or strange in any part of Her Majesty's dominions? How is it that it has endured the ordeal of doubt and denial, and has gained such general confidence in so short a time? By what means has the knowledge of a practice so new as the use of this manure been so quickly diffused? Truth, strong as it may be, cannot travel without a conveyance, and facts are generally longer on the road than fiction. Nor does ignorance ever give place to knowledge without a struggle for the victory. To the meetings, speeches, publications of our societies, and to the press connected therewith, we must attribute the extraordinary results we have alluded to. By bringing the ignorant and the learned together, those who were willing to be instructed mingling with those who were capable of teaching, by employing capital in collecting and publishing facts, by making these the texts from which our speakers have discoursed to thousands, and which our journals have carried to every market table in the kingdom; by these means, all of which our Agricultural societies and clubs have employed, information on this point of practice has been promulgated, and ignorance has been dispelled at a speed, and in a degree unparalleled at any other period in the history of agricultural improvement, and probably unattainable by any other means. By these means, the disadvantages of locality and circumstance, of isolation and limited opportunity of active communion with the world and its daily progress, have been overcome—disadvantages which have always been regarded as fatal obstacles to the progress of improvement, either in the knowledge or the practice of our farmers.

A CHEAP AND EXCELLENT MANURE FOR SWEDES.

To the Editor of the Mark-Lane Express.

Sir,—I beg to inform your readers of a very cheap and excellent manure, which I last year made use of, and which exceeded my most sanguine expectations. I had a large heap of turf ashes remaining on hand after the turnip season of 1843; and last winter I made my boys save a barrow full or two every morning of the shortest

horse-dung in cleaning out the stables; that I had wheeled into an out-house, and mixed with the ashes, a layer of one and the other, till the ashes were all used. I soon found the heap was in a state of glowing heat, though no steam was ever perceptible; a rapid decomposition took place, and when the time arrived for using it, it appeared like very fine mould. This I drilled with Swedes, and in one piece where there was no other manure, I drilled 50 bushels to the acre, and the plants were fit for the hoe in three weeks from the time of sowing. This year I have no turf ashes, and am using coal ashes in the same way, and intend to drill about 30 bushels per acre. My heap is now extremely warm, and smells strong, but there is no appearance of any evaporation. Perhaps I should say that my land is a flinty and chalky brush, with a gravelly or chalky subsoil.

I am, Mr. Editor, your obedient servant,
A WILTSHIRE FARMER.

DISPARITY IN HORSES, AND DISPARITY IN MEN.

Ninety-six inches (or eight feet) is the utmost height of which we have any authentic record of any living man having attained; and thirty-two inches that of the shortest man, that man not being deformed. The largest horse known is Carter's Mammoth, which, if *strictly* measured, is we believe, just seventy-eight inches (19½ hands) to the shoulder: the smallest, her Majesty's pet, "The Eastern equine pigny," twenty-six inches (6½ hands.) The relative proportions are, therefore, exact—the giant is three times the height of the dwarf; the Mammoth horse three times the height of the Eastern pet.

COMPARATIVE ESTIMATE OF THE SEVERAL APPLICATIONS OF MILK.—Allow me to call your attention to the following extract from Mr. Morton's report of a Gloucestershire Vale Farm, in a work published some years ago, by the Society for the Diffusion of Useful Knowledge. He says:—"In feeding calves for the butcher, it generally takes seven weeks to feed them to about a cwt. each; and they consume the following quantity of milk in the seven weeks:—About 19 gallons the first week, 14 the second, 20 the third, 24 the fourth, 27 the fifth, 30 the sixth, and 32 the seventh; so that it takes 159, or say 160 gallons of milk, to produce 112lbs. of veal. The average money value of the various modes of converting milk into a marketable commodity will stand thus:—

| | |
|---|--------|
| 100 gallons of milk produce 112 lbs. of cheese, at 6 <i>d.</i> per lb. | 2 16 0 |
| And 5lbs. of whey butter, at 8 <i>d.</i> per lb | 0 3 4 |
| | 2 19 4 |
| 100 gallons of milk yield 34 lbs. of butter, at 10 <i>d.</i> per lb. | 1 8 4 |
| And of poor cheese 74 lbs. at 3 <i>d.</i> per lb | 0 18 6 |
| | 2 6 10 |
| 160 gallons of milk produce 112 lbs of veal, at 7½ <i>d.</i> per lb. | 3 10 0 |
| But calves newly dropped are worth (deduct) | 0 10 0 |
| | 3 0 0 |
| Value of 160 gallons of milk to make veal | 3 0 0 |
| Therefore 100 gallons of milk to make veal are worth | 1 17 0 |
| Thus making cheese is more profitable than making either butter or veal." | |

The French papers are occupied with the discussion of Sir Robert Peel's measures. The *Constitutionnel* says:—

"This plan, presented with great ability, is equally well concocted in all its details. But it shows that Sir Robert Peel has yielded enormous concessions to the manufacturing party, and that the compensation offered to the landed interest is little more than a nullity. The battle will be sharp, but cannot be doubtful. Sir Robert

has the whole Opposition with him, and he will easily find among his own friends a hundred votes to give him a majority.—Since the Reform Bill, the Parliament of Great Britain has not had a question of so much weight to resolve upon as that which is now submitted to it; and the changes proposed will, if they are adopted, have, most assuredly, immense consequences on the economy of the country."

The *Press*, after giving the heads of the proposition of Sir Robert Peel as regards articles of food, adds:—

"As regards manufactured articles, Sir R. Peel could cut away at full liberty for two reasons. First, because England—thanks to the secular protection which she has enjoyed, and all the mechanical resources which she has appropriated to herself before all other nations—is without a rival in all the great manufacturing branches. Next, because by the intelligent reform which she effected in 1843, the raw produce which she receives from foreign countries has been relieved from all duties: whilst elsewhere—amongst us, for instance—these matters are still charged with heavy duties, which necessarily increase the price of the manufactured article. In proposing to the English manufacturers to give up a protection altogether superfluous, Sir Robert Peel reminded them by a quotation from Adam Smith that they had been the first to invoke for their profit the establishment of those monopolies against which they protest loudly, now that they have no longer need of them. This little quotation, which has the merit of being just, was much applauded by the agricultural party. Sir R. Peel, therefore, reduces the tariff on cotton, woollen, and linen cloths. It may be taken as certain beforehand that the imports from abroad will scarcely increase from his doing so. As to silks it is another matter, as the diminution of duties may facilitate some ventures from France, although the duty is still tolerably high. The avowed object of these reductions, and some others, is to induce other countries to do the same. In this respect it is probable that each nation will consult its own advantage, convenience, and position, before considering itself bound to a reciprocity which for most of them would be perfectly illusory."

PRESENT STAFF OF THE POST-OFFICE IN THE METROPOLIS.—In the principal (or Secretary's) office there are 64 officers thus classed:—Secretary, assistant secretary, private secretary, chief clerk to secretary; senior clerks—first class 3, second class 6; juniors—first class 9, second class 14; surveyor's office 8, clerks to ditto 16; surveyor's (Scotland) 2, clerks to ditto 3. In the mail-coach-office there are 43—viz., surveyor and superintendent, first clerk seniors 2, juniors 4; inspectors of mail-coaches 8, railway clerks 27. In the solicitor's office 4—namely, solicitor, first clerk, second clerk, third clerk. Receiver-general's office 17—receiver-general, chief clerk, seniors 3, juniors 9, extra clerks 2, messenger 1. Accountant-general's office 31—accountant-general, deputy, chief clerk, principal clerks 3, seniors 6, juniors 19. Money-order-office 170—president, chief clerk: first class, senior class 4, second clerks 25, ditto 50; junior probationary class 89. Inland and foreign offices 645—superintending president, presidents 4, assistant president, vice-presidents 3, senior clerks 9, assistants 33, clerks 36, juniors 50; clerks to superintending president 3, inspectors of official correspondence 4, officers in charge of India mails 3, packet mail clerks 2, officers at paid windows 4, clerks of letter carrier's accounts 2, instructor of junior clerks, senior messengers 2, junior ditto 49, watchmen 2. The inspector of letter carrier's office (which is an adjunct to the inland office) contains an inspector, 7 assistant inspectors, 147 sub-sorters, and 281 letter carriers. Ship-letter office 8—inspector, chief clerk, senior clerks 2, juniors 4. Dead and returned letter office 21—inspector, first clerk, seniors 5, juniors 14. London district office about 600, viz., superintending president, chief clerk, assistant clerks 5, surveyor, remittance clerk. In the sorting offices there are 2 presidents, 4 vice ditto, 2 window men, 14 clerks of divisions, 12 first sorters, 12 second ditto, 10 sorters and 31 sub-sorters, an inspector, 2 assistant inspectors, 9 junior inspectors, 16 stampers,

and about 500 letter carriers, the last return only including the carriers attached to the office in St. Martin's-le-Grand, giving a grand total of 1,600 persons appointed in the London offices alone; independently of the various "receivers," and other paid officers of the establishment.

We learn our virtues from the bosom friends who love us; our faults from the enemy who hates us. We cannot easily discover our real form from a friend; he is a mirror on which the warmth of our breath impedes the clearness of the reflection.—*Jean Paul Richter.*

MODE OF CULTIVATION ADOPTED IN CORNWALL, TO RAISE EARLY POTATOES.—1. The potatoes are set in December and January. 2. The sort planted are the Kidney, and the ashleaf kidney. The best ashleaf kidney are procured from Somersetshire, and are planted in the neighbourhood of Uxbridge. 3. The best soil is a light loose soil, and the ground should be well worked. Old grass land is preferred. 4. The seed should be set about eight inches in depth, four inches distance from each, and the rows, fourteen inches apart. An open situation, facing south or south east, is the best situation—proximity to the sea is the most advantageous. 5. The best manure is long stable dung covered with seaweed, the seed being first slightly covered with earth. 6. The finest, cleanest, healthiest seed is best. When cut, never plant a piece with more than two eyes, some prefer one. When small potatoes are used, they are sometimes planted whole. 7. To protect the tops from being injured by early spring frosts is impracticable in extensive plantations; but, in small quantities, they may be protected by being planted in sheltered situations, and litter kept over them, or by trenching them as celery, and covering the trenches with litter transversely till the weather becomes warm.

IMPROVEMENT OF BRITISH AGRICULTURE.—At a late meeting in West Norfolk, Mr. Hudson, of Castleacre, made the following remarks:—He was able to prove that the farmers had not only kept pace with the increased population, but had actually "gone ahead." In 1821 the population of England and Wales was 11,978,875. It had been calculated, and he believed correctly, that on the average each individual would require a quarter of wheat for his sustenance during the year. Now, taking the ten years previously to 1821, he found that the average quantity of foreign wheat entered annually for home consumption was 429,076 quarters. If they deducted that number from the population (calculating every person to consume annually one quarter of wheat), the amount of wheat produced each year in this country at that time would appear to be 11,549,799 quarters. In 1831 the population had increased to 13,897,187; the average importations of foreign wheat for the previous ten years were 534,762 quarters; so that the growth of wheat in this country might then be taken to average 14,362,425 quarters annually. There was, therefore, an average increased production in the last ten years over the preceding ten years of 1,812,626 quarters per annum. Again, in 1841 the population was 15,911,757, the average importations of foreign wheat during the preceding ten years were 998,118 quarters, and the quantity produced in this country annually might be calculated at 15,003,639 quarters. The total increase in the home production during the period through which his calculation extended was 3,453,840 quarters. He considered, therefore, that he was justified in contradicting the assertion that the farmers had not kept pace in production with the increasing population of the country.

THE WILD CATTLE OF TEXAS.—The settlers who have recently opened farms near the sources of the San Gabriel and Brushy find the country well stocked with a singular breed of wild cattle. Large droves of these cattle are found not only on the San Gabriel, Leona, and other tributaries of Little River, but also on the San Sabá, the Llaho, and many tributaries of the Upper Colorado, far above the settlements. They differ in form, colour, and habits from all the varieties of domestic cattle in Texas. They are invariably of a dark brown colour,

with a slight tinge of dusky yellow on the tip of the nose and the bull. Their horns are remarkably large, and stand out straight from the head. Although these cattle are generally much larger than the domestic cattle, they are more fleet and nimble, and when pursued, often outstrip horses that easily outrun the buffalo; they seldom venture far out into the prairies, but are generally found in or near the forests that skirt the streams in that section. Their meat is of an excellent flavour, and is preferred by the settlers to the meat of the domestic cattle. It is said that their fat is so hard and compact that it will not melt in the hottest days in summer, and the candles formed with it are far superior to those that are formed with the tallow of other cattle. Some persons have supposed that it is possible these cattle are a distinct race, indigenous to America; and the immense skeletons of a species of fossil ox, with straight horns, that are often found in the beds of the Brazos and Colorado would seem to strengthen this opinion. But as these cattle are now found only in the vicinity of the old missions, it is much more probable that they are the descendants of the cattle introduced by the early Spanish adventurers. It is said that a species of wild cattle, differing from all the domestic breeds of the Eastern continent, is found in the Sandwich Islands; but it is well ascertained that this breed is derived from the domestic cattle that were left on those islands by Vancouver. These cattle are so wild that they can only be caught alive by entrapping them in disguised pits. The celebrated botanist, Douglas, while on a tour in one of those islands, fell into one of these pits, and was gored to death by a wild bull, who had been thus entrapped. Several attempts have been made by the settlers on the San Gabriel to domesticate the wild cattle in that section, but they have been thus far unsuccessful. As they are far superior to the domestic cattle of the country, not only in size, strength, and agility, but also in the flavour of their meat and the density of their fat, they might, if once domesticated, become a valuable acquisition to the agriculturists of the country.—*Houston Telegraph.*

THINK.—Thought engenders thought. Place one idea upon paper—another will follow it, and still another, until you have written a page. You cannot fathom your mind. There is a well of thought there which has no bottom. The more you draw from it, the more clear and fruitful it will be. If you neglect to think yourself, and use other people's thoughts, you will never know what you are capable of. At first, your ideas may come out in lumps—homely and shapeless; but no matter—time and perseverance will arrange and polish them. Learn to think, and you will soon learn to write—and the more you think, the better will you express your ideas.—*Selected.*

THE BŒUF GRAS AT PARIS.—The cattle-show at which the fat ox destined to perambulate the streets of Paris during carnival was to be chosen, took place at Poissy, on Thursday. The jury consisted of the members of the corporation of Parisian butchers. At noon, 1,607 oxen were drawn up on the space marked out for the purpose. The jury went round, and selected the oxen of the most remarkable appearance, which were afterwards conducted into the court-yard of the administration of the Caisse de Poissy, where the jury proceeded to make the choice. The ox called Dagobert, five years and a half old, belonging to M. Cornet, of Caen, was unanimously fixed upon. The Dagobert, for size, has no rival in France, except the elephant of the Garden of Plants. Its length from the horns to the tail is 2 mètres, 85 centimètres (nearly nine feet); its height, 1 mètre 74 centimètres; its circumference, at the sternum, 3 mètres 2 centimètres, and its weight 1,975 kilogrammes (3,950 lb.), or five kilograms more than père Goriot, the fat ox of 1845. Independently of the Dagobert, M. Cornet presented six other oxen not less remarkable. One of them, Fleur des Bois, weighed only 200 kilogrammes less than the Dagobert; another, much smaller, of the Durham breed, would be admired even in England, for the symmetry of its proportions and its size. Dagobert was to arrive at Paris on Friday, by the Rouen Railroad.

NORTH CORNWALL EXPERIMENTAL CLUB.—The monthly meeting of the members of this club took place on Thursday, the 27th ult., at Stratton, when a large body of the clergy and yeomanry attended. On the removal of the cloth, the agricultural proceedings of the month, and the current prices of grain and cattle, were discussed. Beef, in this district, was proved to be worth 56s. per cwt.; mutton, 6d. per lb.; wheat, 14s.; barley, 7s. 6d.; oats, 4s. 6d. to 5s. for two imperial bushels. After the prices were fixed, and the discussions ended, the president, G. Gurney, Esq., delivered a very instructive lecture on draining. He had exhibited many experiments at the previous meeting with the air-pump, and he now explained how they might be introduced, with their modes of action in the soil. He stated that, as far as his own experience went, he was perfectly satisfied of its utility, and was certain that he had drained lands, which in their original state, were not worth 5s. per acre, and, by draining, the value of the ground was increased to 35s. He stated that Sir James Graham told him that he (Sir James) had drained land to a considerable extent, and the results were quite as satisfactory as his own. On the conclusion of the lecture, many lively discussions took place, in which the Rev. Messrs. Kingdon, White, and other gentlemen, took part. The meeting separated, with a conviction that draining was the foundation and first step to be taken in agriculture. The next meeting will take place the last week in February.

EXTREMES.—We are told that extremes never last long, but it would be well if it could be said that extreme poverty did not last long.

NEVER LOOK SAD.

(From the Poems, by T. H. Bayley.)

Never look sad—nothing's so bad
As getting familiar with sorrow;
Treat him to-day in a cavalier way,
And he'll seek other quarters to-morrow.

Long you'd not weep, would you but peep
At the bright side of every trial;
Fortune you'll find is often most kind
When chilling your hopes with denial.

Let the day carry away
Its own little burden of sorrow;
Or you may miss half of the bliss
That comes in the lap of to-morrow.

When hope is wrecked, pause and reflect
If error occasioned your sadness;
If it be so, hereafter you'll know
How to steer to the harbour of gladness.

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