

THE GLEANER:

AND NORTHUMBERLAND, KENT, GLOUCESTER AND RESTIGOUCHE

COMMERCIAL AND AGRICULTURAL JOURNAL.

OLD SERIES] *Nec araneorum sane textus ideo melior, quia ex se fila gignunt, nec noster vilior quia ex alienis libamus ut apes.* [COMPRISED 13 VOLUMES.]

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Agricultural Journal.

From the Bristol Mercury, Sept. 20.

THE POTATOE DISEASE.

The following correspondence has just taken place between Lord Portman, President of the Royal Agricultural Society, and William Herapath, Esq., the eminent analytical chemist of this city, in reference to seed potatoes for 1846.—His Lordship, in a subsequent letter, requests that the correspondence may be made public, and it has been handed to us for that purpose. This subject is of vital importance, and is worthy of the deepest attention:—

Bryanston, Sept. 13, 1845.

"Sir,—I observe in the newspapers that you have directed your attention to the potato disease, and have advised as to the use of the starch, &c. As I am specially bound, during this year of my holding the office of President of the Royal Agricultural Society of England, to promote inquiry, and to notify observations on subjects relative to the produce of the soil, I trouble you with this letter, and ask if any method has occurred to you by which the potato may be preserved for the planting of 1846? I have found that potatoes apparently sound and free from the disease, though in a field or garden which has been partially diseased, have, after being stored away, shown signs of the disease and have rotted off; and I fear that the greatest quantity of the potatoes will thus perish, and so continue the distress of the poor into another season. I have directed some potatoes to be stored in slake lime, in the hope that it may preserve them, but have of course, yet had no time to judge of the effect. I therefore ask for your opinion, as one of our most eminent chemists, upon this point, and would ask leave to make known your reply, if you are able to offer an opinion sufficiently explicit to be useful.

"I remain your obedient servant,
"Wm. Herapath, Esq." Portman.

To Lord Portman, President of the
Agricultural Society.

Bristol, Sept. 17, 1845.

"My Lord,—In reply to your letter of the 13th inst., I must say that I do not think it would be either safe or prudent to depend upon the infected potatoes of the present season as seed for the next year; as, in all instances, I have found the diseased parts to extend when the potatoes are kept in a damp situation: I should therefore expect that if any diseased seed was kept so dry as not to rot before setting time, yet upon being planted and left in the damp soil, the rotting process would then begin, and the hopes of the husbandman be disappointed. I have no doubt that some potatoes, apparently sound, have (as stated by your Lordship) been found to be affected after stowing away; but I do not consider this to have been an origination of it, but merely that which was noticed when dug has become apparent after storing. When a potato is first affected the diseased parts are scarcely visible, but upon keeping it in a dry place the spots soon become dark, and consequently more apparent, but the spots do not extend; if however the tuber has been kept in a damp place, the spots not only extend rapidly over the surface, but penetrate into the interior, and in a short time it will be completely rotten. As far as the slake lime, which you have used in your potato stores, has a tendency to prevent the tubers from touching each other, or by its power of absorbing water of keeping them dry, it will answer a good end; but it must not be expected to have any chemical effect upon the diseased parts or their juices. Anything which, like dry sawdust or sand, would prevent contact, would prevent the propagation from one tuber to another, and any substance capable of absorbing the moisture of the air in which the potato is stored, would prevent the extension of the disease in each diseased root.—Our best microscopists and cryptogamists are divided in opinion as to whether the cause of the calamity is

a fungus or not. After all the examination I have given to the subject, and a careful review of all the evidence brought before me on the two sides, I believe that it is; and I am daily confirmed in the opinion originally expressed, that the only advantageous way of treating the diseased potatoes, is to obtain from them, by rasping and washing, the starch which they contain—by which process all their nutriment, can be retained; and if it is well dried it will keep for any length of time. The operations can be performed in the cottage or manufactory alike, as no apparatus beyond a tin rasp, (a nutmeg grater), a tub and clean water, are required; and I have ascertained that however far the disease might have extended, even if the root is rotten, yet the starch can be separated, and in a state fit to be eaten, if it shall be well washed, as all the bad parts come away with the water, while the great weight of the starch carries it to the bottom of the vessel. It is required that the fecula should have all the qualities of the best foreign arrowroot, it is only necessary to wash it last in water containing a little chlorine, when it has unrivalled colour and quality, and this I can speak of practically, having made many tons of the article. I will only add, that an opinion has been circulated that the disease is owing to the introduction of guano as a manure; this I feel no hesitation in contradicting, as I have seen it in situations where no guano has been used, and where every other variety of manure has been resorted to.

I am your Lordship's most obedient
servant,
"WILLIAM HERAPATH."

On Wednesday evening, in an introductory lecture at the Adelphi School of Agricultural Chemistry, 70, Strand, Mr. Abram Booth went at some length into a chemical analysis of the prevailing potato distemper. In many ways this had followed the example of the contagious diseases which devastate and depopulate mankind; selecting certain districts and tracts for its attacks. Examining such potatoes chemically, there was a deficiency of starch from the new elaboration of the sap of the tuber, and an excess of carbon. The fibrous and albuminous portions, not containing their proper proportion of the other gaseous elements, decomposition was a speedy result, as seen in the blackness which they soon assumed. The starch was less in quantity, and appeared to be the only part of the potato which was properly formed. This therefore might be properly used as food, whilst the employment of the decayed portions was decidedly noxious. Preventatives to its further progress were easily attainable. The disease it was stated, originates from a fungus which would perpetuate by seeds, but this may be prevented, and the seed destroyed by sprinkling the seed potato with lime, or washing it with dilute solutions of chlorine, chloride of lime or muriatic acid.

From Coleman's European Agriculture.
INFLUENCE OF KNOWLEDGE UPON
AGRICULTURE.

Here, then, there is an opportunity for the highest degree of intelligence, as applicable to the improvement of agriculture; for who can doubt that these extraordinary results are the consequence of that intelligence and enlightened skill, which are equally the instruments of success in every other art. But it seems idle to argue this point. All the improvements which have been made in agriculture are so much the result of the application of mind and of knowledge to the subject, as any of the improvements made in manufactures or the mechanic arts. Accident has produced nothing. The dull, plodding laborer originates nothing, any more than the beast which he drives. The present advanced state of agriculture as a practical art, all the improvements which have been effected in it, are due to the highly intelligent minds, the men of science, of learning, of observation, of skill, who have applied their attention, and have devoted their time, talents, and fortunes, to it.

The pioneer in the improved agriculture of the United States was Jared Eliot, of Connecticut—an educated clergyman, whose essays have a permanent value, and may be read with advantage even at the present day. The author of the New England Farmer's Dictionary, a most valuable book, published half a century since, and which has rendered an immense service to agriculture, was the Rev. Samuel Deane, of Maine. John Lowell, who contributed far more than any other individual to the improvement of agriculture in the United States, was an accomplished lawyer a man of science and of taste, and as much distinguished for his intellectual rank and attainments as he was eminent for the highest virtues which could adorn his character as a man. Aaron Dexter, the beloved physician, an eminent chemist in the very imperfect state of the science, a man whose name was a synonyme for kindness, and to whose memory I shall be pardoned for here recording the humble tribute of my most grateful affection and respect, was an eminent friend and promoter of agricultural improvement. Fessenden, Buel, and Gaylord, were all men of highly cultivated minds, stored with scientific lore, distinguished for their zeal in the cause of an enlightened agriculture, and honored with the power, which they used with so much zeal and efficiency, of conferring immense benefits upon the agricultural community. While even this Report is in progress, the grave has closed over the remains of a devoted friend to agricultural improvement in Massachusetts—a man of the highest order of intellect, of a mind rich in various knowledge, and of a profound legal attainments; and for his personal worth, his public spirit, and private virtues, surpassed by none in his claims upon the affection and respect of his friends and fellow citizens. On the English side of the Atlantic, Tull, the author of the improved husbandry; Young, the eminent agriculturist, who kindled so great a zeal, and diffused so great a mass of information, among his countrymen; and Sinclair, as great a benefactor to improved agriculture as England has known,—were all men of liberal education and distinguished scientific attainments.—Von Thaer, on the Continent, himself a host in agricultural skill and science, was bred to a learned profession. If I were at liberty to violate a rule which I have made absolute, I might refer to many living examples, on both sides of the water, of men of the finest genius, the most accomplished education, and rare scientific attainments who have rendered, and are daily rendering, the highest benefits to practical agriculture, and which without their aid and enterprise would never be realized. It is, then, with agriculture as with every other valuable art;—its success and improvement must depend mainly upon the education of those who pursue it, and all hope of its progress must rest upon the science, in the most extended sense of that term, which is brought to bear upon it.

THE HAPPY FARMER.

BY MRS. LYDIA H. SARGENT.

Saw ye the farmer at his plough,
As you were riding by?
Or wearied 'neath his noon-day toil,
When summer suns were high?
And thought you that his lot was hard?
And did you thank your God,
That you, and yours, were not condemn'd
Thus like a slave to plod?
Come see him at his harvest home,
When garden, field, and tree,
Conspire, with flowing stores to fill
His barn, and granary,
Amid the new-mown hay,
Or proudly aid, with vigorous arm,
His task as best they may,
(His dog partakes his master's joy,
And guards the loaded wain,

The feathery people clap their wings,
And lead their youngling train,
Purchase their hoary grandseir's eye,
The glowing scene surveys,
And breathes a blessing on his race,
Or Guides their evening praise.
The Harvest Giver is their friend,
The Maker of the soil,
And Earth, the Mother, gives them bread,
And cheers their patient toil.
Come, join them round their wintry hearth,
Their heart felt pleasure see,
And you can better judge how blest
The farmer's life may be.

From the American Agriculturist. TO PURGE A HORSE QUICKLY.

When medicine is administered to a horse with his bowels in a natural state or costive, it will not operate in less than twenty-four hours, and is frequently thirty to forty in doing so. When the horse's bowels are purging, medicine will act very rapidly; their arises from the great irritability of his bowels, and purging with him is always the result of inflammation. On the other hand, costiveness is the cause of inflammation. When there is inflammation of the bowels in the horse, purgative medicine should never be given. In nine cases out of ten, when severe, the medicine will be fatal. Palliative treatment not remedial is to be resorted to in cases of inflammation.—When purges are to be used, this must be borne in mind. To the horse, fasting and thirsty, give one to two pounds of Glauber salts, with plenty of warm water, in which has been stirred some meal. In three or four hours after, give an injection, composed of three gallons of warm water, one quart of common cheap oil of any kind, or melted lard, one quart of molasses, and a half a pound of salts, all well mixed up together. If the first injection does not produce purging, give a second. If the horse have no inflammation give him exercise, if he has, avoid it carefully and keep him cool.

From Family Receipt Book.

TO JUDGE OF THE QUALITY OF WHEAT FLOUR.

Take four ounces of the flour of wheat separated from the bran; let it be mixed with water so as to form a thick paste, which must be thoroughly kneaded for a quarter of an hour. The paste is afterwards to be well washed, continually kneading it with the hands under the water, and changing the water from time to time. This washing and kneading are to be continued until the water no longer becomes white by the operation; the glutinous matter, which is of a whitish gray color, then remains in the hands. If the wheat was sound, the matter is glutinous and elastic; if the wheat was heated, the matter will be brittle; if the wheat was in a state of fermentation, no glutinous matter will be obtained from it.

Drying Potatoes may be a good method to save them from rot, and it may be well to save them in this way; yet by exposure to the air they will lose much of their good quality. If potatoes lay in a box or a barrel, open to the air, in a room, shed, or other place out of the cellar, they will lose much of their good qualities in five or six weeks. To preserve potatoes in good condition, they should be dug with as little exposure to the air as possible, and put in a cellar in a close bin, cask, or box, and the cellar should be closed so as to exclude light and air. Yet it may be better to save them with a loss of a part of their good properties, than to let them decay; but we would caution the lovers of good potatoes against too much exposure, as it will cause a great depreciation in their value.

CARE FOR DIARRHEA.—A certain cure for this complaint is found in rice water. Boil the rice, take the water, make it palatable with salt, and drink it copiously while warm. We never knew this simple thing to fail.