

that other trees growing in adjoining fields not occupied as pastures, exhibited no such appearance; and that the larger crop in the shade was a result of the amount of *top dressing* the land had received here, from the numerous cattle which had made the shade of this tree a resort for several hours each day,—with the added reason that cattle always prefer grass grown in the sun, to shaded pasturage, especially if that shaded portion has been stimulated by fresh manure; and hence this grass was not gnawed so short as the other.

A striking instance of this fallacious mode of reasoning, occurs in the origin of the opinion that wheat turns to chess—the more remarkable on account of the singular combination of causes to favor such an opinion. A farmer sows a field of wheat: a part of it is injured by winter; chess is found growing abundantly on the injured spots and no where else; and the first doubtful thought is that the wheat by partial injury has been changed into chess plants. But so bold a conclusion needs stronger and additional proof. This is found in the fact that if the wheat was eaten off early in the season by cattle, chess spring up in its place; that, if injured seed is sown the same result often takes place; and especially that when apparently clean wheat is sown, plentiful crops of chess immediately follow. The application, however, of Bacon's *experimentum crucis*, which requires that the experiment should fit the theory in all possible variations, proves the fallacy of the opinion of transmutation. For it is found that there are many parts of the world where the chess plant is entirely unknown, but which are equally liable to the changes of weather producing winter killing, and where cattle are as liable to break into wheat fields, as here. It has also been ascertained, that the chess plant will grow and perfect its seed, in a dense growth of wheat and other plants, unperceived, and thus fill the ground with its seed; but that when this shading is removed, as by the winter-killing of the wheat, or its destruction by cattle, the chess plants will spring up several feet high and spread abroad in every direction, bearing many thousand fold, and that this remarkable property alone is sufficient to account for the supposed change of the wheat to chess. It is likewise found, that from the smallness of the chess seed, it frequently exists unperceived in great numbers in what is supposed to be clean seed wheat, and is thus often largely sown, unknown to the farmer; and that its extreme hardness enables it to escape injury during its dissemination in manure, and in the dung its dissemination in manure, and in the dung of cattle and other animals. The fact that with all these adverse circumstances, many farmers in various parts of this State, have succeeded by many years of great care, in entirely eradicating the weed from their seed and from their soils, shows beyond a that some other explanation than transmutation must be adopted for the appearance of fields of chess where wheat only has been sown.

We could adduce other instances; but these may be sufficient to show the importance of forming opinions with great care, and not until a thorough course of accurate experiments has been resorted to,—whether it be in the estimate of the value of manures, different modes of planting and cultivation, he profitableness of different breeds of ani-

mals, or any other important question in farm economy.

REMOVING EVERGREENS.—There is no season for removing evergreens in the ordinary way like that when the buds are just swelling and the roots pushing out new fibres. There are fifty different opinions about the best time to plant evergreens. The above may be taken as ours, and it is not given without plenty of trials of other modes. We except, of course, moving the trees with a large frozen ball during winter—but one which is only occasionally practiced. These who can get their trees with a ball of earth attached, during this winter, should not put off so very beneficial an undertaking.

SCIENTIFIC PHENOMENA.—During a recent lecture delivered by Professor Faraday, at the Royal Institution of Science, a piece of pure iron, peculiarly prepared, so that its particles might present a large surface to the action of the oxygen in the atmosphere, was ignited and continued to burn like tinder. The ready combustion of iron, compared with gunpowder, was shown by a very simple experiment. Some iron filings and gunpowder were mixed together and sprinkled into the flame of spirits of wine burning on a plate, when the iron filings caught fire and burnt in bright sparks, whilst the gunpowder passed through the flame without igniting; and the quantity that fell on the plate was afterwards dried and exploded.

Lead prepared in a similar way was shown to be still more inflammable, for it caught fire in a beautiful flame when exposed to the air. The Professor stated that lead was nearly as inflammable as phosphorus, and he explained the cause of its not burning in ordinary circumstances to be that the solid product of combustion forms a film that prevents contact with the oxygen, and the conducting power of the other parts of the metal draws off and dissipates the heat. He pointed out the admirable arrangement by which those combustible properties of the metals are kept in proper control, and bodies that are really so inflammable are made to serve as strong resistors of combustion.

MONTREAL MARKET PRICES.

Rates at which produce is purchased from the Farmers.

5th March, 1857.

Hay from 9 to \$10½ per 100 bundles.
 Straw from 3 to \$4. do.
 Fresh Butter, per lb. from 1s 4d to 1s 6d.
 Salt Butter, do from 11d to 1s.
 Country Cheese. from 6d to 8d.
 Wheat, none offered.
 Barley, 3s 9d to 4s 3d.
 Rye, none.
 Oats, from 2s 3d to 2s 6d.
 Yellow Indian Corn, none.
 Indian Corn, (Ohio) none.
 Buckwheat, none.
 Peas, from 3s 9d to 4s 3d.
 Beef, per 100 lbs. from \$5 to 8.
 Pork, \$8½ to \$9 per 100 lbs.
 Mutton, per lb., from 5d to 7d.
 Veal, 6d to 7½d.
 Eggs, 10d to 1s.
 Honey per lb. 7½d to 8d.

Notice to Farmers.

THE MUTUAL FIRE INSURANCE COMPANY of the COUNTY of MONTREAL, insures the properties of farmers in Lower Canada, at 5s. for £100 currency, for 3 years, &c.

Apply at the office, *St. Sacrament Street*, Montreal; to the Agents in the Country; or to the undersigned Directors:—

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P. L. LE TOURNEUX,

Secretary and Treasurer.

Montreal, 1st July, 1854.

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