

of the action of salts to those contained in cattle dung. In the first place, we have salts of potash, of soda, of lime; these are the most abundant and active. Then we have salts of iron, manganese, of clay, and magnesia. These last existing in small proportion, may be thrown out of the account, bearing in mind, however that, though we set those aside, a plant does not; they enter equally with the others into its composition. Let us begin with the salts of potash. It is found combined in cattle dung, first, with a vegetable acid, the acid of mould. It is a nourisher of plants. Secondly, with sulphuric acid or the acid of sulphur, called oil of vitriol. This is one of the poisoners, existing only in small proportion in cow dung; it ministers to the wants of a healthy plant. The same is true of the common salt, or the murate of soda in dung. If it existed in larger quantities, it would poison the plants to which it might be applied. The next salts are those of lime, phosphate, and sulphate of lime, or lime united to sulphuric and phosphoric acid, forming plaster and bone dust. The acids here, if abundant, would have a decided bad influence, they are poisoners; Now from the small quantity in which these all exist in cattle dung, they act only beneficially. But if you apply a great excess, even of cattle dung, you may be sure of an unfavourable result. It will be produced by the acids of those salts which we have called poisonous. To continue our remarks on the acids of salts of dung, it is to be observed, that they act also upon the soil.

They decompose that. That is, they extract from the soil alkalis, or other substances, like those in the original salt. Now though applied, as they must be, in very small doses in cattle dung, yet because of their decomposing action on soil, they continually renew themselves, they last till all their acid is taken up to supply the wants of growing plants. Let us now, reader, if you understand how the acids of the salts of dung act, turn to the bases or the alkalis and metals and earths of these salts. What is their action? What purpose do they serve in dung applied as manure? First, they enter into and form a part of the living plants, they form a part of its necessary food, as much as do the constituents of mould. Secondly, when these alkalis and metallic bases are let loose, by the disuniting power of a growing plant, then they act as alkalis upon mould. They hasten decay, render mould more soluble, fit it to become food for plants. This account of the action of mould and salt in cattle dung may appear to you, reader, long and hard to be understood. I do request you not to pass it over on that account. A patient reading, perhaps some may require to do more reading, will put you in possession of all you need know, to understand the why and the wherefore of the action of mould, and salt of whatever manure may be used. What has been said of the action of mould and salts in cattle dung, is equally applicable to all manures. If, then, you bend your bones to this subject, and master it, your labor of understanding the action of other manures will be reduced to the mere statement of the several substances which they may contain. We therefore proceed to point out other manures, composed of the droppings of animals.

NUTRITIVE QUALITIES OF INDIAN CORN.

The following observations in relation to Indian corn meal, were communicated to the Journal of Commerce by a physician of the city of New York:

"Yellow corn and white corn are not the same in quality, although they are identical in kind, and may grow in the same field. The nutritive qualities of the yellow surpass that of the white, and that is a good reason why the common sense of the people, or their ordinary experience assigns to it a preference, independently of its mere looks.

"The investigations of vegetable chemistry have revealed to us many important and interesting facts. By the aid of

analysis, it has been ascertained that butter in a pure state, is combined in all, or nearly grapes seeds, and grains. Out of one hundred weight of yellow Indian corn meal, for instance, a good chemist can extract from eight to ten pounds of butter. Out of the same weight of white Indian corn meal, six or eight per cent of butter can be made, thus proving it to be, in that portion so much the less nutritious. Of the nutritive quality of Indian meal, any one can satisfy himself by attending to the usual process of cooking it. When it is boiled thick, as in making mush, if a crust adhere to the side of the vessel, in cooling, it is apt to peel off, of itself, owing to this fatty material in it.

"It has furthermore been proved that the butter obtained from the cream of milk, is not animal secretions, but that it previously existed, in the pure and original state, in the hay or food of the cow; and a skilful chemist can make more butter out of a hundred weight of hay than a cow can, as the cow must appropriate a considerable share of it for the uses and necessities of her organization. Give a cow a hundred pounds of hay and she will render back eight pounds of butter, but an expert chemist can realize 12 or 13 pounds out of it.

"In the choice of the various articles of food, to suit our tastes on various occasions—to correspond to the multiplied emergency of life—the adaptations of the multifarious sorts and qualities of food, display infinite wisdom and goodness. In sickness, in health, in toil, while our means abound, and when they are scanty, we demand different kinds of food, and different varieties of the same kind, to satisfy our real and imaginary wants. Of the grain stuffs, rice contains the least fatty material, and Indian corn the most, and ranging between these two extremes, we have wheat, oats, rye, barley, etc., all different, and yet all of them capable of being applied to the respective conditions which are suited to them.

"It is not on account of the fatty nature of Indian corn meal that it is such a strong kind of food, and that persons unaccustomed to it cannot at first endure it. The nations which feed chiefly on rice, are not near so robust as those who use Indian corn, as the blacks of the south do. Persons unaccustomed to this kind of food, therefore, will do best to commence with white Indian meal, in preference to the yellow, as it is not so rich; and this preference of the white over the yellow has already occurred in England where the article is new.

"There is only one more observation which I wish to make. As Indian corn meal contains so much fat in it, kept too long, it is liable to become rancid, and is then more or less unfit for use. In the shipments made to the West Indies the meal is commonly kiln dried, to obviate as much as possible this tendency to rancidity. For reasons just detailed, the white meal will keep rather better; and from its being lighter and milder, it is much preferred in warm climates, and as the yellow, for similar inducements is in cold.

TO CORRESPONDENTS.

A Subscriber will find his questions answered in another place.

J. W. St. George. We have written our terms, &c. in full, which, we trust, you will receive.

CANADA FARMER.

August 28, 1847.

WHITE FLINT WHEAT.

We have been asked by several farmers who are anxious to adopt every available means to protect themselves against the recurrence of the evils they have suffered this year, where they can obtain this variety of wheat for seed. The Report of the Committee of the Victoria District Agricultural Society published in our 14th No. has determined many to make a trial of this wheat, if they can get it. We have among us plenty of the white Chaff Wheat, which we believe is less

hardy than the common red, and this is by some mistaken for the *White Flint*. But it is not the same, one proof of which, is the simple fact, that it has suffered as much in this neighbourhood from the attack of the fly as any other kind. There is a great deal of confusion among the different varieties of wheat; it is much to be regretted that some one who is qualified, does not examine and classify them, giving each its proper name and also describing its merits and distinctive qualities. Much difficulty and error could thereby be hereafter avoided. In the case of wheat, such a classification is the more necessary, as the different varieties from being carelessly mixed, have a tendency to become assimilated, or to lose their distinctive features.

Difference of soil and mode of cultivation, also cause a change of character, so that the same variety may in different districts be called by very different names. In such cases there is a "distinction without a difference." When seed of these supposed different varieties is sown in the same field, and submitted to the same circumstances of soil, climate and cultivation, it is found to be all alike—but one kind originally. But there are permanent varieties, which preserve, or which so far have preserved a general permanent distinctiveness of character under all circumstances. These it is important to know; some may be valuable for one quality, some for another. We should be able to say, when the soil and climate are given, what variety of wheat is most suitable and what mode of cultivation should be adopted, or if any particular evil is to be guarded against, what kind of wheat is best adapted to meet the case, &c. &c. At present from the confused state of the subject, and the deficiency of information upon it, this can be but imperfectly done.

We have written to a Farmer with whom we are partially acquainted in the Victoria District to send some of the *White Flint* to this place, but we would state here generally, that if any person in that quarter, or in any other, would send a few hundred bushels of the genuine *White Flint* to Toronto, they would get a ready sale for it at a fair price. There is a pretty general inquiry after this wheat for seed. It should be here by the 10th or at latest by the 15th of next month. We will send a few copies of this number of our Journal to be distributed among the farmers in the Victoria District, in order that they may see this intimation. We could ensure the sale of a considerable quantity, if written to for that purpose.

FAIR AT SARATOGA—WHY WE DON'T GO AHEAD.

The New York State Society's Annual Fair, will be held at the above place, on the 14th and 15th of September. There is no doubt but that the exhibition will be well worth going that distance to see. As we remarked in a former number, it is to be hoped not a few of our Canadian Farmers will attend. Such a visit will do much to infuse a spirit of emulation into those who make it, and when they return to their several homes, we may expect to see its happy, vivifying influence extending itself to their neighbours—radiating as from so many centres of heat, until the whole body Agricultural, is found glowing with a warm, lively, generous enthusiasm. *Up, and forward!* is the word. We shall be outstripped in the race. Our active, shrewd, calculating neighbours will carry off the prize. We are placed along side of them, our former advantages are taken away, and we are reduced as nearly as possible to equal terms; the object to be gained is accessible to both; compete with them we must, and if we remain indifferent to improvement; if every thing that can be omitted is passed over; if what is absolutely necessary is only obtained at the last moment, if in a word, every enterprise public or private which has the good of the country in view, and which our neighbours so eagerly avail themselves of, is neglected, sneered at, or opposed until it dies, and by a sort of sympathy, imparts a chilly, death-like

letargy to all around it, what must be the result? Let any man with the 480th part of an ounce of sense answer.

There is "something rotten in Denmark." Our social condition is anti-attractive, anti-adhesive. In fact, as the quack in the play says, we are a "kind of a fluid." We lack all the attractions, except the attraction of gravitation, which prevents motion in a right line. The particles of which we are socially composed, are negatively electrified, they repel each other. In every neighbourhood there are three or four, and sometimes six classes. There is the man who boasts of "good family" at "home." He has seen "society," and it may be, shook hands with "nobility." Though he may have disgraced his friends and been sent to Canada that they might get rid of him, yet if he has a few hundred pounds, he must stand (No. 1.) Then comes the man who may have been steward or butler to some great man "at home" or have filled "a situation." He has scraped together a few hundred pounds, he can ape the manners and assume the air of a gentleman, and he claims to rank (No. 2.) next to No. 1. Then we have, near the large towns, the retired mechanic, (No. 3.) sometimes, not often a retired merchant. These three classes are in one sense farmers, they own and cultivate land. But they look down on the *bona fide* farmer. Among the latter there are three or four classes. There is the old Canadian Farmer, (No. 4.) who has been industrious or fortunate, and who lives in a nice house, and can drive a nice carriage. He feels above his neighbour, though they have lived side by side for 20 years, for the latter is *poor*, he has been a hard drinker, or shiftless, or unfortunate. He is (No. 5.) Then there is the old country man, who came here a farm-labourer, has been for some time a tenant, has worked hard, raised good crops, made money, and at last bought a farm for himself. He knows little about the refinements of life; he has dealt with its rough, every-day usages. We make him No. 6. We might go on and enumerate other distinct classes among those who are included in the general expression "farmers of Canada," but we have mentioned a sufficient number to explain what we mean. Now, No. 1 will not associate with No. 3 though he may visit No. 2, and allow his family to do the same. No. 2 and 3 sometimes visit each other, but No. 2 is so anxious to keep pace with No. 1, that he does not care to be seen much with No. 3. Between the two divisions of our six classes, i. e., between No. 3 and No. 4, there is almost an "impassable gulph." "What are they," says No. 4, "who stick themselves up so?" "Nothing but a carpenter, or a tailor, or a baker—I knew him when he was not worth six-pence;" and though the remark is uncharitable, as well as illogical, any attempt on the part of No. 3 to assume a superiority is sure to be thus greeted. Among Nos. 4, 5, and 6, there is now and then some intercommunication, but little cordiality.—Each class is tenacious of its standing, and as, in this country, there is very little dependence, whenever there is an exhibition of such a feeling, every one who stands lower in the scale, regards it with contempt.

Add to the above the fact that all these classes are sub-divided into two or three political parties, who have long been on the worst possible terms with each other, (though thank God, they have passed through the sanguinary state, and there is now some hope of amicable discussion, and an agreement to differ,) and remember also that they are again divided and sub-divided *ad infinitum* into all sorts of religious sects and persuasions, whose antipathy is proverbial, and we think we have got hold of the reason why there is no such thing as public spirit, public improvement, or public opinion in Canada—why, if one man of one class, brings forward a project it is looked upon with suspicion and distrust by every other—why rail-roads are talked of here, and none but a few speculators take any more trouble in the matter, while our American neighbours have talked, sub-