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Agricultural Journal.

RUST.

From the British American Cultivator.

According to Leibig, rust is most frequently detected on plants growing on soils which contain bog-ore, or turf iron ore. According to Sprengel, rust contains phosphate of iron, to which this chemist ascribes the origin of the disease. Our own experience confirms this opinion. We know that in soils where these ores abound, grain crops are more liable to rust, than in soils where they are not found in abundance. It is very possible that other causes may operate in the production of similar diseases, and we believe they do. It will be the farmer's interest to remedy defects in the soil, or find some means to check the causes which produce disease. One means would be to endeavour to ascertain what crops will be least affected by disease in each sort of soil, and to cultivate that kind of crops upon each. We believe that summer fallowing soil, and thereby exposing it to the influence of the atmosphere, and applying lime to it, would effectually prevent rust in the succeeding crop, in ordinary seasons. We recommend this plan above all others. Lime decomposes the poisonous salts which may be in the soil, that are unfavourable to vegetation. In British America scarcely any lime is ever used in agriculture.—Summer fallowing is not often practiced. If, therefore, pernicious salts are in the soil originally, they are allowed to remain in it, for there is no means adopted by the farmer to decompose them, or remedy the defects in the soil where these salts are presents. We never will admit that the soil and ctimate of Canada are not favourable for agriculture, until we have seen the English system of agriculture introduced and followed up in every particular branch. When this has been done, and failed in producing good crops, we shall acknowledge that we had formed too favourable an opinion of the country.

Drilling and hoeing grain crops, particularly wheat, is one improvement that would pay well, we have no doubt. Hoeing might be done for a dollar the acre at the most, and perhaps in the whole expense of cultivation, no part would be better applied, or produce more benefit to crop and soil. We have been always of opinion that hoeing the land at the particular time it would require it, namely, about the middle of June, would have a great tendency to destroy the wheat fly; as we suppose they are at that time concealed about the roots of the wheat, among the grass and weeds. We know these improvements, to cause general benefit, or to give any effectual check to the wheat fly, must be generally introduced; because otherwise were one farmer to take all the necessary means of cultivating his crop in the very best manner—drilling—hoeing—cleaning—doing all that could be done to ensure a good crop, and destroy the fly within his own fields, his next neighbour, who would not like any such trouble, might destroy all the effects of his labour, by having a slovenly managed crop of wheat or barley that nursed and protected the fly, and that could not be prevented from coming to the well managed crop of wheat alongside. —Hence it is, that any plan to be effectual in checking the ravages of the wheat fly must be general, or it will produce no good to the most careful farmer that he should expend his labour and capital in cultivating properly, as he will be subject to have his wheat crop destroyed by the slovenly cultivation of his neighbour.

ON THE BREEDING OF CATTLE AND SHEEP.

From the Mark Lane Express.

Many farmers consider as matter of indifference that on which the profitable nature of their occupation mainly depends.—The worse breed the female is, the more this will be the case when she is put to a well bred male. Now, it is known to graziers, that the attempt to fatten an animal who possesses no feeding propensities produces loss instead of profit. The feeding propensities descend from the sire, and therefore it is quite just to say, that a breeder of cattle or sheep, who considers it indifferent what sort of a male animal he uses, does consider it a matter of indifference whether he gains profit or incurs loss.

The first thing to be considered in the selection of a male, are the indications by which it may be possible to form a judgment as to his constitution. In all animals a wide chest indicates a strength of constitution, and there can be no doubt that this is the point of shape to which it is most material to any breeder to look, in the selection of either a bull or a ram. The animal also should exhibit great muscular power, or rather that his muscles should be large. This is a usual accompaniment of strength of constitution, but likewise shows that there will be a good proportionate mixture of lean and fat in the meat produced by the animal: the muscles being that part of which the meat is lean. A thick neck is, both in bulls and rams, a proof of the muscles being large, and there can hardly be a greater fault in the shape of a male animal, of either sort than his having a thin neck.

In a bull there ought to be a full muscle on each side of the back bone just behind the top of the shoulder blades, he ought also to have the muscles on the out side of the thigh, and extending down nearly to the hough. It is sufficient to say therefore, that no male animal is fit to be used at all as a sire, whose handling is not good and that the more perfect his shape is the better

A man can only look at the general qualities of females he possesses; and observe what are the faults most prevalent among them, these he should be particularly careful to avoid in the male he intends to use. All that a man can do is to avoid putting a male and female together, whose imperfection is the same, thereby increasing the fault already existing in his stock. It need not be said that those who turn two or three rams of different shapes and qualities into a field with all their ewes, without attempting to make any selection among them have no right to expect to be successful breeders, and if they do expect it, will certainly be disappointed.

There is one failing to which all breeders are liable, but to which the breeder of male animals, from the greater interest attached to his occupation is more particularly liable, and against which he ought most carefully to guard himself: this is, too great partiality for animals bred by himself, and ought frequently to use the stock belonging to other breeders, and fairly compared its merits with those of his own.

It will be advisable for the agricultural society, to circulate by all means in their power, all suggestions as shall appear to them likely to be useful to those engaged in the cultivation of the breed in this district, and although it may be not able to accomplish much beyond the influence of its own members, yet let it be able to trace to this patriotic body the introduction of those improvements, which will tend to raise the character of Flintshire agriculture.

The last paragraph of the above letter is entitled to the attention of Agricultural societies in the British America. Here good can be effected by them, by circulating useful information and suggestion among farmers than by cattle shows, where they held once a month. The greatest utility of such societies is to instruct those who require it, a good system of practical husbandry. It is true those who they would be anxious to instruct, may not benefit by their instructions. However this may be, it is only when they have used their best endeavours to accomplish this most desirable good, that they will have done their duty, and expended the funds committed to their charge to the best advantage, for the community who have contributed them.

From the British American Cultivator.

BRITAIN AND THE UNITED STATES.

The annual produce of Britain from her agriculture, manufactures, &c., amounts to £514,000,000, equal to about 2,500,000,000 dollars of our currency, which will give near twenty pounds sterling, or about one hundred dollars for each inhabitant, man, woman, and child of the British Isles. Of this vast amount annually created, only £148,000,000 are manufactures, of which only one third is exported, so that the manufacturers for the export sales hardly produce a twelfth part of the annual income derived from the industry of the nation, and of this export trade about one third is to British possessions in all parts of the world. The British Isles, therefore, have the sources of their wealth within themselves and their colonies, and do not sell annually to foreigners more than a *fifteenth* part of their annual production The annual produce of the United States, from her agriculture, manufaatures, &c., is said to be 1,282,000,000 dollars, giving about seventy five dollars for each of her inhabitants young and old of 17,000,000, her present population. The reported amount of annual exports from the United States in 1837 was about 120,000,000 dollars, of which considerably over half was to the British Empire. We have later returns of her exports, but we cannot lay onr hands upon them at this moment.

Instantaneous Ginger Beer.—Fill a bottle with pure cold water, then have a cork ready to fit it, also a string or wire to tie it down with, and a mallet to drive the cork, so that no time may be lost; now put into the bottle sugar to your taste, (syrup is better), and a teaspoonful of good powdered ginger, shake all well, then add the sixth part of an ounce of supercarbonate of soda; cork rapidly, and tie down—shake the bottle well —cut the string—the cork will fly—and drink ginger beer

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Weeds in Grass Land.—Ox-eye Daisy.—This plant will probably abound in the ensuing summer, being liable to increase in dry seasons such as the last. It is a fortunate circumstance that the only two weeds which spread much in our mowing land, the Crowfoot and the Ox eye Daisy, will both make very tolerable hay. The daisy is by many accounted worthless, because being earlier in flower than our common grasses, it is generally mowed too late. But if it is mowed when nearly all in flower, but before any of the seed is ripe, it will be found equal to the average quality of the hay in Halifax markets for cows but horses do appear to be fond of it. When allowed to ripen its seed it produces a great quantity, which is generally spread with the manure over all the cultivated ground. When there is a succession of dry seasons, perhaps the best way to master it, is to give a top-dressing to the grass land sufficient to make it produce at least two tons of hay to the acre, when the daisy will be found to be mostly suffocated by the clover.

Crowfoot or Butter Cups.—This prefers moist and rich soils. Cattle eat it willingly early in the season, but it becomes so very acid when in flower that they then avoid it. It loses its acrimony by drying, and makes very good hay, but it is like the Daisy, too early for Clover and often turning back and decaying before mowing time. Top-dressing will not diminish the proportion of Crowfoot; to get rid of it, the land should be ploughed, a crop of roots taking from it, and then be laid down with clean seed. The practice of using the sweepings of the barn floor for grass seed always serves to introduce weeds Where ever Crowfoot forms the principal part of the crop, it should always be mowed while it be full of flowers, as it will then make very good hay for cows.

Salt Meat.—The method for which a patent has been taken out by Mr Payne, is thus described:—The meat to be salted is placed within a strong iron vessel, which is closed in an air-tight manner, and the air exhaust-