

Wray, an intelligent English planter from Natal, (South Africa), who has been a sugar-grower in both the East and the West Indies, and who is confident that a plant known among the Caffres as the *Imfy* might be advantageously naturalized and grown in all temperate climates for the production of Sugar. He says it will grow wherever Indian Corn will ripen, though it likes a hot bright Summer; that two crops a year may be harvested in our Cotton States and one in any part of our country south of 45°; that it does not require replanting oftener than the Hop, (say four times in a century;) and that it will yield three to four thousand pounds of choice Sugar to the acre at each harvest. A plant similar in species but inferior in kind has recently been brought hither from Northern China, and is doing well. The expressed and boiled juice of this plant has hitherto been supposed incapable of granulation, but Mr. W. has discovered a process which obviates this difficulty. I heartily trust this subject will receive due attention in America, and I think Mr. Brown, in the Agricultural department of our Patent Office, can give further information with regard to it.

I bid adieu to the World's Exhibition of 1855 in the saddening conviction that I have not half seen it, and that nine-tenths of its visitors are even more ignorant of its contents than I am. Its immensity tends to confuse and bewilder; the eye dances rapidly from one brilliant object to another, while the mind fixes steadily upon none; so that he who wanders listlessly gazing from court to court, from gallery to gallery, may carry away nothing positive but a headache. You will see hundreds jostling and crowding for a peep at the Imperial diamonds, crowns, &c., which are said to have cost several millions of dollars, where a dozen can with difficulty be collected to witness the operation of a new machine calculated to confer signal benefits on the whole civilized world. Who looks at the Self-Adjusting Windmill, which was first exhibited in our country last year? Yet that, if it prove what it promises, will do mankind more service than all the diamonds ever diverted from their legitimate office of glass-cutting. As I pass through the darker courts and relatively deserted outskirts of the Exhibition, my eye rests on admirable products on which years of faithful labor have been spent—to very little purpose so far as their presence here is regarded. It will be instructive to preserve a copy of the awards made by the Juries now scanning the various inventions, &c., and compare them ten years hence with the verdicts stamped on those same inventions by experience. What competent observer will act on this hint and publish the result.

DECREASE OF EMIGRATION.

The total number of emigrants who sailed from Liverpool for all foreign ports during the three months ending June 30, was 43,880, against 84,330 in the corresponding quarter of 1854. The decrease is not confined to any particular branch of the migration trade.

THE IMPROVEMENT OF GRASS LANDS.

In the improvement of grass land, the first thing to be done, is the removal of all

stagnant water by means of thorough under-draining. Unless this is accomplished the best of cultivation, seeding and top-dressing, will fail to produce their full effect.

When our meadows fail, from whatever cause, it is generally advisable to plow them up in the fall, and cultivate them thoroughly for two or three years, with corn, potatoes, or other root crops, manuring them heavily, and seeding down again when the white daisy and other weeds have been destroyed, and the old turf has entirely disappeared. If, however, the land is so low that it is not desirable to cultivate it with other crops, it may be plowed up in August, and well worked with the cultivator, harrow, &c., till a fine "seed bed" is obtained, not forgetting to give it a good coat of manure;—if long manure plow it in; if well decomposed compost, which is best, spread it on the furrows, harrow and cultivate till it is thoroughly incorporated with the soil. About the first of September, sow it with artificial grasses, and be not sparing of the seed; half a bushel of Timothy and half a bushel of red-top, or other grasses in proportion, is none too much. Generally, by so doing, a fair crop of good hay is obtained the next season. This method of re-stocking worn out meadows has been practised with much success by many excellent farmers in New-England. Some of them recommend sowing clover with the Timothy and red top, in the fall, but we should be inclined to fear it would seldom survive our hard winters; unless indeed it were sown quite early, say in July or first of August.

We have seen meadows greatly improved by simply scarifying the sward in the fall by means of a heavy harrow, and then sowing from eight to sixteen quarts of Timothy, red-top and rye-grass seeds, equal parts, to the acre. In the case alluded to, heavy rain followed immediately after the sowing, and the seeds were not harrowed in at all, but generally it would be well to cover them slightly with a light harrow. We need hardly add that a good coat of compost, spread on the sward before the first harrowing, would be of much benefit.

The best time to top-dress all meadows that are not of too light or porous a nature, is in the fall. In England nothing was more common, twenty years ago, than to make a compost with barn-yard manure and old headlands, and after it was well decomposed, to cart it on to the meadows during the winter months. The effect was very beneficial. Unmixed manure was seldom used. Since the introduction of Peruvian guano, however, the practice of composting old headlands has, to some extent, given way to top-dressing with light artificial manures. Guano gives a better immediate effect at a much less cost; but whether it is ultimately more profitable is an open question. With hay at from \$15 to \$20 per ton, there can be no doubt that a judicious application of good Peruvian guano, in the fall, or *very early* in the spring, will give sufficient

increase, for a few years at least, to pay for the guano and have a reasonable profits. The constant exportation of hay draw heavily on the soil for potash, and as *guano contains very little potash*, (not more than 2 per cent) it may reasonably be supposed that to manure with guano alone will soon leave the soil deficient of available potash. If such should be the case however, an application of wood ashes occasionally would supply the deficiency.

Aside from under-draining, there is no improvement better worthy the attention of American agriculturists than that of irrigating grass land. Who that has ever seen the beautiful water meadows of Gloucester, Hampshire, Devon, and other English Counties, can doubt that we have in irrigation a grand means of increasing the production of our grass land, and through them, by keeping an additional quantity of stock, of raising the general fertility of the farm? If, Signor J. DEVINCENZI, secretary of the Italian committee on Irrigation, could say that "irrigation as an art is neglected in England," what would he say of this country? A perusal of his "Report on Milanese Agriculture," showing the astonishing effect of irrigation in Lower Lombardy, would satisfy the most sceptical that we have in the water now running uselessly down our hill-side a great and perpetual source of wealth. We have enterprising farmers who raise water a considerable height by means of hydraulic rams, windmills, &c., for irrigating purposes, and if it will pay them to do so, how much more profitable would it be for those so located, that an abundance of water can be obtained by damming up a stream and diverting it from its natural course by means of artificial ditches sluices, &c.?

The Hon. A. B. DICKINSON, at the last Annual Meeting of New-York State Ag. Society, stated that he had found hard water, containing much lime, far less valuable for irrigating than soft water. This is quite probable, since the soft or rain water contains much more ammonia than the hard water; nevertheless the water running over the calcareous soil of Hampshire in England, and which is consequently *very hard*, is used with great success. It is generally supposed that water productive of fish, particularly trout, is well suited for irrigating, for the reason that the substances which supply the young fry with food, are also beneficial to plants, while mineral matters which are noxious to fish, are also injurious to vegetation. For grass land, experience seems to indicate that clear water is preferable to that which is turbid from containing organic or inorganic substances.

But although, as a recent writer says, the "clearer the water the better," an admixture of animal excrements adds greatly to its fertilizing properties, and there can be no doubt that there are many farms so situated that a stream of water could be turned through the barn-yard, and used to convey a considerable portion of the manure