



Clean Seed.

THE maxim "whatsoever a man soweth that shall he also reap," is practically disbelieved by multitudes both as it respects agriculture and morals. Nevertheless it contains an important and immutable truth. Few farmers properly appreciate the necessity of care to have their seed grain unmingled with seeds of various grasses, ches, and pernicious plants in general. A good deal of the nonsense about wheat turning to ches, or being transmuted into oats, or barley becoming transformed into wheat, grows out of carelessness in sowing mixed seed. Ches may be completely eradicated from a farm, and the crops of weeds annually raised made "small by degrees and beautifully less," until they disappear altogether, by a little attention to cleaning the seed before sowing it. The improvements in fanning mills have now been carried to such a pitch as to leave the farmer no excuse for negligence. Modern machinery in the best grist mills for separating the wheat from all foul admixture before grinding it, tells many a disgraceful tale of carelessness, and also shows that even the cleanest wheat offered in the market has impurities and mixtures in it. When you reflect upon the wonderfully reproductive power of most weed seeds, and the rapidity with which a farm may be stocked with these pests, how can you avoid the conclusion that the utmost vigilance in this matter is the imperative duty, as it is the obvious interest, of every farmer?

A winnowing mill has recently been erected in Boston, and is described by the *Cultivator*, which is capable of separating almost any mixture of seeds, and deposits each kind by itself. As examples of what it will do the following may be cited:—326 bushels of rye were bought for coffee-making. It was seen to have some ergot among it, and was put through the mill in question. The result was, 306 bushels 37 lbs. clean rye; 21 bushels 20 lbs. heavy oats; 6 bushels 23 lbs. shrivelled rye and oats; 1 bushel small, black, worthless seed; half a bushel of peas; 2 bushels 27 lbs. of chaff; half a bushel of sticks and rags; and 8 lbs. of pure ergot, which was sold to a druggist at \$1.50 per lb. The measure of the separated articles somewhat overruns the original mixture, it having been estimated by weight, and the standard for several of the articles being less than that for rye. To give other instances—4,702 lbs. of flax-seed were put through the mill; result, 173 lbs. foul seed and chaff, separated. 28,992 lbs. of California mustard subjected to the cleaning process, turned out 27,829 lbs. clean mustard, the balance consisting of foul seed, a great proportion of which was thistle seed, dust, chaff, and other refuse.

Mills, thus unerring and perfect in their operation are not accessible to every farmer, but thorough, vigilant use of the best fanning mills, washing, and other approved methods of securing purity of seed grain, cannot be too strongly urged upon every tiller of the soil. All such precautions will be amply repaid in the verification of the proverb "prevention is better than cure."

Experiments in Wheat Culture.

MR. LAWES, a celebrated English agriculturist, has recently made public the results of certain experiments tried by him in growing wheat year after year on the same land, with various kinds of manure, and without manure of any kind. Fifteen acres were set apart in 1843 for the purpose of these experiments. The field was divided into different plots. One plot was sown without manure of any kind, and the others were dressed with various artificial fertilizers, e. g., superphosphate and salts of potash, soda, and magnesia, salts of ammonia, &c., ashes of plants, &c. while one plot was treated to 14 tons of barn-yard manure per acre, in addition to the mineral appliances.

Results:—1. The twentieth crop, just harvested, is the heaviest yet produced.

2 The plot which has been sown to wheat annually for 20 years without manure of any kind, but thoroughly tilled, has averaged 16½ bushels per acre.

3 The plot which has been dressed with mineral manure has averaged 18½ bushels per acre,—or only two bushels more than the unmanured plot.

4 The plot which received in addition to the mineral fertilizers a supply of barn-yard manure, has yielded on an average 34½ bushels per acre. In some favourable seasons, the increase from the use of barn-yard manure was much greater than the average yield; once, when an extra quantity of dung was used, and the season was unusually favourable, the yield was 55 bushels per acre.

Lessons:—1. Tillage is manure. The word "manure" signifies "hand labour." To stir the soil, letting in air, moisture, sunshine, &c., is to manure it.

2. Thorough cultivation pays. The average yield on the unmanured plot sown year after year to the same crops well hoed, weeded, and pulverized, exceeds the average yield of land in Canada, with advantages of manure, change of crops, &c.

3. Mineral fertilizers are chiefly valuable from their combining with other elements such as common dung supplies. By liberating the ammonia especially, and bringing it into direct contact with the plant, they increase the crop.

4. Barn-yard manure made of as rich material as possible, well taken care of, and liberally applied, is the grand means to be employed for maintaining and increasing the fertility of land.

We should have liked to know the effect of barn-yard manure without mineral fertilizers, but this, from the account we have seen, seems not to have been tried. The above lessons are of the highest value, and cannot be too often called to mind by the farmer.

Wasted Wealth.

PARIS throws five million a year into the seas. And this without metaphor. How and in what manner? Day and night. With what object? Without any object. With what thought? Without think-

ing of it. For what return? For nothing. By means of its intestine. What is its intestine? Its sewer. Five million is the more moderate of the approximate figures which is the estimate that popular science gives. Science, after long experiment, now knows that the most fertilizing and the most effective of manures is that of man. The Chinese, we must say to our shame, knew it before us. No Chinese peasant, Eekeberg tells us, goes to the city without carrying back, at the ends of his bamboo two buckets of what we call filth. Thanks to human fertilization, the earth in China is as young as in the days of Abraham. Chinese wheat yields a hundred and twenty fold.

There is no guano comparable in fertility to the detritus of a capital. A great city is the most powerful of stercoraries. To employ the city to enrich the plain would be a sure success. If our gold is filth, on the other hand, our filth is gold. What is to be done with the filth, gold? It is swept into the abyss. We fit out convoys of ships at great expense to gather up at the South Pole the dropping of petrels and pen guins, and the incalculable element of wealth which we have under our own hand, we send to the seas. All the human and animal manure which the world loses, restored to the land instead of being thrown into the water, would suffice to nourish the world. These heaps of garbage at the corners, of the stone blocks, these tumbrils of mire jolting through the streets at night, these horrid scavengers' carts, these fetid streams of subterranean slime which the pavement hides from you—do you know what all this is? It is the flowering meadow, the green grass, it is the marjoram and thyme and sage, it is game, it is cattle, it is the satisfied low of huge oxen at evening, it is perfumed hay, it is golden corn, it is bread on your table, it is warm blood in your veins, it is health, it is joy, it is life. Thus wills that mysterious creation which is transformation on earth and transformation in heaven.

Put that into the great crucible—your abundance shall spring from it. The nutrition of the plains make the nourishment of men. You have the power to throw away this wealth and to think me ridiculous into the bargain. That will cap the climax of your ignorance. Statistics show that France alone makes a liquidation of a hundred million every year into the Atlantic from the mouths of her rivers. Mark this—with that hundred millions you might pay a quarter the expenses of the Government. The cleverness of man is such that he prefers to throw this hundred millions into the gutter. It is the very substance of the people which is carried away, here drop by drop, there in floods, by the wretched vomiting of our sewers into the rivers, and the gigantic collection of our rivers into the ocean. Each hic-cough of our cloaca costs us a thousand francs. From this spring two results—the land impoverished and the water infected—hunger rising from the furrow and disease from the river. It is notorious, for instance, that at this hour the Thames is poisoning London.—*Victor Hugo.*