

VALUABLE THRASHING MACHINE.—There is now in operation at Tywainhayle experimental farm, belonging to S. and R. Davey, Esqrs., a thrashing machine, which, from its simplicity of construction, and its great power, is a vast improvement on the former thrashing machines, or those now generally used. It performs the work of three horses, and thrashes 125 sheaves of wheat and 225 sheaves of burley or oats an hour; and this is performed by a poor pony of 13 hands high. The improver is a miner, named Michal Harris, a poor man residing at Silverwell, in the parish of St. Agnes, who is possessed of surprising natural genius, and therefore deserves support. He carries the whole apparatus about in a small cart, and contracts with the farmers of the neighbourhood at per 100 sheaves. Several gentlemen have seen the machine and pronounced it to be the greatest improvement yet made. Could the poor man have raised sufficient money to have carried him and his machine to Southampton, the gentlemen say no doubt he would have obtained a good prize, since they did not see one there that approximated to anything near the improvement he has made.—*West of England Conservative.*

PRIZE BULL.—At the great agricultural show at Southampton, the first prize of 30 sovereigns, in the class "Herefords," was awarded to Mr. Perry, of Monkland, near Lecomister, for his Hereford bull. This extraordinary animal, which excited universal admiration, has won other laurels than those recently gained at Southampton. Last year the first prize was awarded to him at Hereford Candlemas fair, and afterwards he carried off the prize at the Royal Agricultural Meeting at Derby. This year at Hereford his owner received for him the first prize allotted to Herefords; and now, to crown the noble animal's triumphs, he has just obtained the same distinction at the great meeting at Southampton, where all England is brought into competition. Really his worthy owner has great reason to be proud.—*Worcestershire Chronicle.*

AGRICULTURE AND MANUFACTURES.—Why should Agriculture be protected? is a question often asked by pseudo free traders—men who know little or nothing of the real meaning of their liberal doctrines. Ask a shoemaker what free-trade is, and he will tell you—the admission duty free into this country of everything except shoes. Ask a tailor and you will get a similar answer. Ask Alderman Brooks and his reply will be: "We are all for ourselves in this world—free trade in everything, but don't meddle with what I deal in." Take the mass of the Leaguers and put the question to them. Their ready reply will be to this purport—"Free trade means that foreign corn should be imported into this country without payment of Custom-house-dues."

LOSS OF TIME IN PLOUGHING.—When ridges are 78 yards in length, no less a space of time than 4 hours and 39 minutes is spent in turnings in a journey of 8 hours; whereas, when ridges are 274 yards long, 1 hour and 19 minutes is sufficient in the same length of time.—*Code of Agriculture.*

Many years ago I advocated the employment of ammonia as a manure, and whether its mode of benefit, is by its becoming the food of plants, or whether it acts as a stimulus, or whether in both ways it is beneficial—the fact is most certain, and I was led to become its advocate from noticing one circumstance, known to every practical gardener, that the dungs of animals are fertilizers in the following order,—nightsoil, pig dung, dung of stall fed cattle,

and precisely in the same ratio do their ammoniacal constituents decrease: the first named has the most, and the last the smallest amount of the ammoniacal salts. Since the days that I reasoned upon these facts, many experiments have been tried, and much science has been applied to the subject, resulting in establishing the truth, that the salts of ammonia, are among the gardener's best friends, not only as fertilizers, but as the destroyers of predatory insects. I would particularly warn those purposing to try their powers not to be rash, for they are most powerful agents, and capable of being destructive as well as salutary. The judicious gardener, instead of burning weeds, as formerly, usually throws them into a pit and works them into one of the most beneficial of composts, by mixing with them lime and common salt. To this, according to Professor Kindley's suggestion, might be added with great advantage some of the ammoniacal liquor from the gas-works. For it is a rule, to which I recollect no exception, that animal and vegetable manures are superiorly fertilizing in proportion to the quantity of the salts of ammonia, or other compounds into which nitrogen enters, that they contain.

Epsom salt has been recommended by Professor Liebig as a manure for the potato. One hundred weight per acre would be an ample dose. It is recommended to be applied with nightsoil, one load of which is equal, as a fertilizer, to eight loads of stable manure. Potatoes contain magnesia which is afforded to them by the Epsom salt.

It would be easy to add to these examples of manures found to be beneficial when applied, owing to the suggestion made by a knowledge of the chemical constituents of the crops; but for further information I must refer the reader to my brother's valuable work on fertilizers.

Enough has been said to demonstrate that it is most important to manure a plant with matters resembling it in composition: and acting on this principle on the continent, the vineyards are always manured with the trimmings and other exuvie of the vines. But it does not always follow that to manure a crop with such refuse is the best fertilizer that can be applied. It is necessary that any manure, to be available to a plant, must be capable of solution, for the roots can only absorb it in that state. It would be useless to apply carbonate of magnesia to potatoes, for it is insoluble, but sulphate of magnesia is soluble, and being imbibed with the moisture of the soil, is afterwards decomposed and assimilated by the plant.

Next in importance is to ascertain what manure is best suited to any particular plant, is applying it at the most appropriate season. This, beyond a doubt, is at the season when its roots are imbibing food from the soil—that is during their season of growth. It is then that liquid manure, and all saline manures, should be applied. At the same time, I am not inclined with some modern gardeners to abjure winter manuring altogether. Stable manure and some other composts, may then in many cases be most advantageously applied, not only to economize labour, but to store the soil with available food for the roots when vegetation first revives in the spring. Any manures to improve the staple of the soil, such as clay, chalk, or sand, can in general be most readily put on, during the frosty weather of this more leisurely season.

A correspondent of an American paper, writing from the Brazils, gives the following interesting particulars of the process of tapping the India rubber, or caoutchouc tree, and of manufacturing the gum into shoes and other articles:—

"The caoutchouc tree grows, in general, to the height of 40 or 50 feet without branches, then branching, runs up 15 feet higher. The leaf is about six inches long, thin, and shaped like that of a peach tree. The trees show their working by the number of knots or bunches made by tapping; and a singular fact is, that, like a cow, when most tapped, they give most milk or sap. As the time of operating is early day, before sunrise we were at hand. The blacks are first sent through the forest armed with a quantity of soft clay, and a small pick-