

their edges, which dries and assumes a horny form, and is known by the name of *grapes*. The grease is supposed to arise from the filth and urine of the stable acting on the tender skin of the heel; yet some horses are more subject to it than others in any situation. Care is the best preventative, and as this has banished the disease from the cavalry of most nations, it would doubtless prevent its recurrence among farmers' horses where it is most injurious.—*Id.*

TO THE TOTAL HAYMAKERS.—Sir: Having tried the system of total abstinence last year, during the hay season, with my men, and having found it answer in every respect, perfectly, I beg you will allow these few lines a place in the Journal this week, as the hay season is rapidly approaching, and in ten days many will be beginning, and I am anxious that others should try the plan during the harvest.

I had my men from Bedfordshire, and having calculated the expense of the former allowance of beer per man, I gave them exactly the same amount in money, and my halflist assures me, that nothing could be more regular than the men, and on Monday morning instead of being weaker, as formerly, from the effects of Saturday and Sunday's drinking, they were refreshed and stronger than ever. That he never had an angry word during the whole season, and never heard an oath—and such was the success, that I shall never have any more beer in my fields, and I know that I shall be as much benefited by the steadiness of my men as the men will be by the saving their constitutions and money.

Many persons came during the hay season to see the dinners go into the hay fields, which one of the men cooked, at their expense for his time; and instead of cans of beer and a little bread and cheese—a large wheelbarrow full of roast or boiled meat in large pans, and potatoes, &c. &c., and a pall full of coffee was sent to them. At the end of the day, instead of going to the ale-house, the men read a chapter in the Bible—united in prayer in the barn, and then lay down to rest. And it really was a scene upon which I look back with great delight. Two or three of my neighbours tried the same plan, with similar success, and this year I am commissioned to announce that we want eleven mowers, and eighty eight haymakers more than those already engaged on teetotal principles.

I feel certain that nothing but prejudice stands in our way, and I therefore would strongly urge all our members who do come to work at the harvest to set out with prayer, and to remember that they are responsible for the good or bad example which they may set, and that not only are the eyes of all the country upon them, but that "the eyes of the Lord are in every place beholding the evil and the good."

Yours truly,

JOHN TROTTER.

May 13, 1841.

—*London Temperance Journal.*

Prof. Liebig is a strenuous advocate for a rotation of crops, and his reasons are based on the theory of *Decandolle*, which he considers as fully established: "Decandolle supposes that the roots of plants imbuë soluble matter of every kind from the soil, and thus necessarily absorb a number of substances which are not adapted to the purposes of nutrition, and must subsequently be returned to the soil as excrements. Now, as excrements cannot be assimilated by the plant which rejected them, the more of these matters which the soil contains, the more unfruitful must it be for plants of the same species. These excrementitious matters may, however, still be capable of assimilation by another kind of plants, which would thus remove them from the soil, and render it again fertile for the first. And if the plants last grown also expel substances from their roots, which can be appropriated as food by the former, they will improve the soil in two ways."—*Cultivator.*

IMPORTANCE OF CHEMISTRY TO AGRICULTURE.—If we strew the floors of our stables with gypsum from time to time, they will lose all their offensive smell, and none of the ammonia which forms can be lost, but will be retained in a condition serviceable as manure."

Pastures act a most important part in returning to the soil a supply of nitrogen in place of that taken away in the hay and grain. In large farms, where each field in rotation is in grazing, the nitrogen is completely replaced, and where the manure made on a farm are carefully returned to the soil, the quantity of this impor-

tant ingredient must increase every year. When the night soil of cities shall be generally converted into *poudrette*, as it now is in some places, no nitrogen of consequence will be lost, as the quantities used in the shape of corn and cattle will be returned to the country and made available for new crops and the feeding of new animals. The following extracts will show the loss farmers sustain from not attending to these powerful manures:

"When it is considered that with every pound of ammonia which evaporates, a loss of 60 pounds of each (grain) is sustained, and that with every pound of urine a pound of wheat might be produced, the difference with which these liquid excrements are regarded is quite incomprehensible. In most places only the solid excrements, impregnated with the liquid, are used, and the dung-hills containing them are protected neither from evaporation or from the rain. The solid excrements contain the insoluble, the liquid all the soluble phosphates, and the latter contain likewise all the potash which existed as organic salts in the plants consumed by the animals."—*Id.*

WHAT SHALL WE DO WITH OUR BARLEY AND APPLES?—If the demand for barley and apples falls off, the farmers as a matter of course will not grow such large quantities as they now do—other productions of the soil will be wanted in larger quantities, and the farmers will soon find out what is most wanted, and what will pay best. The growers of popples, and makers of opium in the East Indies, will doubtless inquire with equal earnestness—"What shall we do with our poppies?"—*English Paper.*

A HINT TO FARMERS.—We may send to England for Durham cows, and to Spain and Saxony for the choicest sheep—we may search the world over for cattle that please the eye; but unless they receive the best care, and liberal feeding, they will most assuredly deteriorate and eventually become as worthless and unworthy of propagation as any of the skelton breeds that now haunt our rich but neglected pasture lands. We remember an anecdote in point, and will relate it by way of illustration. A farmer having purchased a cow from a county abounding in the richest pastures, upon taking her to his own inferior pastures, found that she fell short of the yield which he was informed she had been accustomed to give. He complained to the gentleman of whom he had purchased, that the cow was not the one he bargained for, or, in other words, that she was not what she was 'cracked up to be.' 'Why,' said the seller, 'I sold you my cow, but I did not sell you my pasture too.'

CHEMISTRY.—When butter is to be made, if a little old butter be put into the cream, the butter will come from much less churning. When soap is to be made, if a little old soap be put into the lye and grease, the soap will be made with less boiling.—*Farmer and Gardener.*

It is stated that the oil expressed from the castor bean is as useful for lamps as the best whale oil, and can be procured by the cultivation of the castor bean, at about one half the expense.

That man is poor who cannot pay his debts though he has thousands in his possession. That man is rich, who 'owes no man aught but love,' though he eats his corned beef and bread from a pine table, in a log cabin kept neat and clean by a tidy and industrious wife.

EDUCATION.

We extract the following observations upon religious and moral instruction, embracing sentiments which cannot, we think, be too frequently repeated or too widely circulated.

"The necessity of religious and moral instruction for children is universally admitted, and yet perhaps there is no part of the subject of education that is so little understood, or that is so seldom judiciously carried into effect. Here, too, the mistake is made of confounding words with things; or, to use a scriptural expression, of substituting the letter which killeth for the spirit which giveth life. The error is in over-estimating the force of precept, and undervaluing that of example. A man of irritable nerves and great infirmity of temper, with 'the cane constantly in his hand, is employed to teach children the lesson, 'Thou shalt love the Lord thy God, with all thy heart, and thy neighbour as thyself.' A teacher who