

MENTAL IMPROVEMENT FOR FARMERS.

Some men profit by observation more than others, but few know the means by which this power of observation may be increased. How few farmers know that cows and sheep have no upper teeth; how few are aware that cold water will dissolve more salt or lime than hot water. Does one in one hundred know that a gallon of water will dissolve more plaster of paris than it will of slacked lime, that has been long enough exposed to the atmosphere to become carbonate of lime? How many know that water is at its mean of size when at 40° of heat, that if cooled below that temperature it swells, until it becomes ice at 32°, and if heated above 40° it also swells, until it eventually becomes steam, thus occupying more than 1,700 times its original space? Still, all these are facts, and to minds generally observant, they are well known to be true.

The science of farming embraces all Nature's laws, and the habit of observation will soon render the farmer ready to recognize these laws in all their useful applications. Let him know enough of chemistry, which he may do by one week's reading to comprehend the various changes that the ingredients of the soil undergo to enable them to enter the plant, and he will soon observe the fact, that these chemical changes must include the ability of being dissolved in water, before the plant can receive them. He will also soon find that water, in its pure state, will not dissolve the necessary quantity of all these materials, unless it contains carbonic acid. When he observes that water from a spring, applied to plants in the time of drought will not produce the same amount of improvement as is received from a similar amount of water falling through the atmosphere in the form of rain, he will soon understand that the rain-water comes charged with some ingredient from the atmosphere which the spring-water does not contain—this is ammonia, and is received from the decay of former crops, animal excretions, &c. The exercise of the mind in the observance and application of the commonest truths of Nature's laws, will capacitate it for other steps in progression; for the brain, like the arm of the blacksmith or the leg of the dancing-master, must increase in energy at least, if not in size, by healthful use.

The inhabitants of the country have this power of observation to a greater extent than those whose tastes lead them to become inhabitants of large cities, and to engage in mercantile pursuits. A boy, who, when asked, which was the direction of up stream, answered the question by throwing a stone at a frog, then remarking, a frog always jumps up the stream when disturbed.

Let any farmer devote the evenings of a single winter to the reading of Geology, Entomology, Chemistry, Natural Philosophy, and Natural History, and apply his acquired knowledge as an amusement, while pursuing his vocation during the following summer, and he will find himself able to observe and comprehend thousands of incidents connected with natural law, which would before have passed by, unobserved. He will then see and understand that the soil is but a debris of the rocks, that in its original formation this occurred from the combined influence of sun and air, and changes of temperature by freezing and thawing, in rendering these rocks a soil. He will see how the convulsions of nature have mixed the soils of different localities; he will see, also, that the earliest vegetable growths were necessarily grosser sorts than those now produced; and that they, by receiving carbon from the atmosphere, for the carbon originally must have existed there in immense quantities, in the form of carbonic acid, by their decay deposited it in the soil, thus improving its quality and rendering it fit for the development of a more advanced class of vegetation.

He will next be able to observe, why deeply disintegrated soils can never suffer from drought, because he will know that when the water is absent from the soil, it is present in the atmosphere, and will be deposited on the surface of colder particles, at greater depths than can be reached by the atmosphere when attempting to penetrate shallow plowed land. He can trace the action of this moisture and its office in

the soil; he can know what amendments are required to replace those which he may find to be deficient; and, indeed, he can render himself doubly happy and a better servant of his Creator, and his vocation ameliorating to his fellow-men. All this does not call for the tedious exertions of thought as practised by the mathematician and the merchant, but merely for the culture of the power of observation to see truths as they exist, and apply them rightly; and this, and nothing else, he will find to constitute the science of agriculture.—*Working Farmer.*

THE MAHOMETAN RELIGION.

The religion which was first taught by Mahomet, many hundred years ago, has been gradually extending its sway from that period to the present time, and is now professed by one hundred and fifty millions of the human race—or more than one-seventh part of the whole population of the globe. Even at this moment it is believed by intelligent writers to be quietly, although none the less effectually, pushing forward the boundaries of its dominion upon every side except upon that where it is combated by the prayers and Bibles of the Christian world. The progress of Christianity has been so much more rapid, and upon so much grander a scale than that of Mahometanism, and the advancement of the latter has been so closely confined to nations and people with whom we have little communication, that the growth of the religion of the prophet has been hardly perceptible even to the careful observer. But affairs are assuming a different aspect now. Already the priests of Mahomet and the ministers of Christ are arrayed against each other in that remote region, where the east and west meet, and a great conflict of faith is at hand.

The Mahometan religion far from growing feeble with age, is still, among those people who have professed it for centuries, a vigorous, local and national faith. With it are connected sentiments of patriotism for the present, and of veneration for the past; and its peculiar character, admired, and cherished, inasmuch as it tends to perpetuate among its followers a position of constant antagonism with those other nations which they most abhor. The Rev. Dr. Newman, an English lecturer and writer of merit, says:

"No well authenticated tokens come to us of the decay of the Mahomet faith. It is true that in one or two cities, in Constantinople, perhaps, or in the marts of commerce, laxity of opinion and general scepticism may to a certain extent prevail; as also in the highest class of all, and in those who have most to do with Europeans; but I confess nothing has been brought home to me to show, that this superstition is not still a living energetic principle in the Turkish population, sufficient to bind them together in one, and to lead them to bold and persevering action.

M. De Lature, a French writer, and the author of "Le Desert et le Soudan," offers the following testimony to the strength of Mahometanism in the nineteenth century:

"Not only is the number of unbelieving and indifferent no greater now than it was in the early ages of Islamism; it is in truth much smaller. And if that religious spirit which once achieved so many prodigies reveals itself no longer in our day by anything great or glorious, it is not the fault of the people of Islam; it is not they who are demoralized, who tremble at the idea of war; it is not they whose weak hands let fall the sword of Mahomet the conqueror, of Selim the inflexible, of Soliman the law giver. The people is what it ever has been; it only wants a chief; but this chief has long been wanted. In Africa, in Asia, in Europe, Islamism has lost nothing. Faith is everywhere vivid, and if piety is more rare than faith, this has always been equally the case."

The dominions of the religion of the prophet embrace, besides Turkey in Europe, which is but as a drop in the great sea, large portions of the continents of Asia and Africa. Within the last few centuries, it has conquered paganism, and found its way among the inhabitants of Malacca and some of the Spice Islands; it has, as well as the Christian religion, found a foothold upon the shores of New Guinea, and it is said, that Mahometan missions are even now established in the eastern part of China, and

their missions laboring for converts among the followers of Confucius.

In Africa, the religion of the Koran embraces nearly all the tribes north of the tenth parallel of north latitude, and many to the southward of it—taking in more than one half of the continent. It has been extended there, and is still being extended, both by conquest and conversion.

Notwithstanding the great extent and power of the Mahometan faith, experience has shown that wherever it is brought in direct contact with the Christian religion, and upon equal grounds, it is unable to maintain its position; and this being the case, can it be doubted that at some future day the crescent of Mahomet will fade away and be extinguished in the bright sunlight of a holier faith?

WHAT NEXT?—The Nord, the Russian organ published at Brussels, gives a translation in extenso of Mr. Cobden's recent pamphlet. To the heading, "Pamphlet of M. Richard Cobden, Member of the Parliament of England," the Nord adds:—"We publish this remarkable work which Mr. Cobden has just written on the question of peace and war. The grave talent and the honest intentions of the writer gave such an importance to this pamphlet that we have thought fit to lay the whole of it before our readers."

RUSSIAN OFFICIAL DELINQUENCIES.—The St. Petersburg Marine Journal a few days back published the degradation of an officer of the commissariat of the fleet of the Black sea, for "aiding and abetting in the getting of false documents."

St. Petersburg letters mention also that the Minister of war has laid before the Emperor "a judgment pronounced by a council of war, which, when it is published, will excite as much sensation as the speculations of Politowski did, who had embezzled 1,000,000 roubles from the funds of the Invalids." The parties affected are seven members and the president of a Tribunal of commerce in the south. They are understood to have made very free with the State Treasury as well as the funds of the tribunal itself.

It is said that Jenny Lind receives five hundred pounds sterling, for each concert in which she sings in the series now in progress in London.

INDUSTRY OF DAMASCUS.—Let us pass through the diminutive old gateway, and we enter a vast covered area, whose shattered roof, dimly seen through clouds of smoke, is supported here by massive pier, and there by stately column. The din of hammer and anvil is almost deafening, and swarthy figures are seen through the gloom sitting on dirty hobs and round miniature furnaces. Heaps of the precious metals, and ornaments of various forms and chaste designs, are by their side, while diamonds, emeralds, and rubies glitter in their hands. Passing through this busy scene, we enter another bazaar, no less noisy. Here are scores of carpenters engaged in the manufacture of the ornamental clogs worn universally by the Damascus ladies. Observe how they work, all squatting. One is planing a board, holding it with his toe! Others are carving pieces of wood, or inlaying them with silver and mother-of-pearl; and while the hands ply the mallet and chisel, the toes do duty as a vice.—*Porter's Five Years in Damascus.*

HISTORY is the light of truth, the memory of life, the witness bearer of time, the messenger of antiquity, and the mistress and directress of our earthly existence.

We often speak of being settled in life; we might as well speak of being anchored in the middle of the Atlantic ocean.

A paper has just been started in Richmond, Indiana, entitled "The Broadaxe of Freedom and the Grubbing Hoe of Truth."

An ignorant man inquires whether mock turtle soup is made out of tortoise-shell cats?

THE QUEEN'S PRESENT TO MISS NIGHTINGALE. The design—suggested by the Prince Consort—of that jewel presented by her Majesty to Miss Nightingale, consists of a St. George's Cross in ruby-red enamel, on a white field, representing England. This is encircled by a black band, typifying the office of Charity, on which is inscribed a golden legend, "Blessed are the merciful." The Royal donor is expressed by the letters "V. R.," surmounted by a crown in diamonds impressed upon the centre of the St. George's Cross, from which also rays of gold emanating upon the field of white enamel are supposed to represent the glory of England. Wide-spreading branches of palm, in bright green enamel, tipped with gold from a framework for the shield, their stems at the bottom being banded with a ribbon of blue enamel (the colour of the ribbon for the Crimean medal), on which, in golden letters, is inscribed "Crimea." At the top of the shield, between the palm branches, and connecting the whole, three brilliant stars of diamonds illustrate the idea of the light of Heaven shed upon the labours of Mercy, Peace, and Charity, in connexion with the glory of a nation. On the back of this Royal jewel is an inscription on a golden tablet, written by her Majesty, recording it to be a gift and testimonial in memory of services rendered to her brave army by Miss Nightingale. The jewel is about three inches in depth by two-and-a-half in width. It is to be worn, not as a brooch or ornament, but rather as the badge of an order.

GRAIN IN ALGERIA.—The breadth of land in Algeria, sowed with cereals, is so great, that if the next harvest should prove favourable, it is computed, that the colony can supply one-fourth of the food required by France.

FIRST AUSTRALIAN MAN-OF-WAR.—The first Australian man-of-war, being the pioneer of the Australian navy, was seen steaming rapidly on Southampton water on the 12th ult. She was a man-of-war screw sloop of a most beautiful model. She had on board three 68-pounders, weighing 56 cwt. each, and was pierced for eight guns. She is quite new, having been built by Young, Son, & Magnay, of London. She is mahogany built, on the diagonal principle. Her tonnage is 580, and her engines (which were manufactured by Rennie) are of 150-horse power.

FASHIONABLE EXTRAVAGANCE.—Fashionable fans in Paris, cost as high as \$2000. A twenty or thirty dollar fan is considered the meanest trifle.

WIDOWS AND WIDOWERS.—We find that, in 1851, 5000 widowers were married to spinsters; 2400 bachelors to widows, and 2700 widowers to widows. More than 7000 widowers stand here, by the side of rather more than 5000 widows. In one case a widower of ninety was married to a spinster of eighty. The youngest widower was twenty, the youngest widow sixteen.—*English Paper.*

WHY CLIMATES CHANGE.—A pamphlet, by John Murray, civil engineer, has recently been published in London, in which he endeavors to account for the changes in climate in different countries, which have taken place in the last century, by the changeable position of the magnetic poles. The magnetic variation or declination of the needle is well known. At the present time it amounts, in London, to about twenty-three degrees west of north, while in 1659, the line of variation passed through England, and then moved gradually west until 1816. In that year, a great removal of ice took place on the coast of Greenland; hence it is inferred that the cold meridian, which now passes through Canada and Siberia, may at one time have passed through Italy; and that if the magnetic meridian returns, as it is now doing, to its old lines in Europe, Rome may once more see her Tiber frozen over.

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