From the Albany Cultivator.

"Knowledge is Power."

The characteristic of the present day, is *reformation* and general improvement in the agricultural department—in the sciences and arts—by general diffusion of agricultural and scientific knowledge and by "elevation and refinement in intellect."

Thus it is by a knowledge of the laws which govern matter and substance, that we are to become acquainted with their nature and composition. Our success in performing experiments, depends on our knowledge of the substances.

We can see a great deficiency among our most practical farmers, in the department of scientific knowledge.

There is a very erroneous idea, which is too extensively entertained among all classes of the community and which has too long wound its serpentine coils around its abettors, and has been a mighty barrier to improvement in agriculture, that a farmer "needs no more knowledge than is necessary for him to read and write and keep his accounts," &c. This might, perhaps, stand a better test a century ago, but in these days of intelligence, and in this enlightened age, we are taught different. Our fathers, we know, had but poor facilities for acquiring knowledge of any kind; and they raised greater crops than we do at the present day. There are many of our best farms, for wheat growing that have been "under the plow," as it is termed, until they have become completely impoverished; and then they are thrown aside as good for nothing. Therefore, under such circumstances, we must contend for a renovating system. But how is this to be accomplished? I answer by artificial aid.

But this cannot be done by us, who consider ourselves good practical farmers, because we have been taught to follow in the footsteps of our predecessors—our fathers, who knew nothing of the ingredients of the soil. We have not knowledge to analyze the different soils, nor to learn what plants will thrive most vigorously on a given soil. If we attempt this, we find soon, we are incompetent to the task—and deficient in all the necessary knowledge upon which we may form a correct judgement or arrive at a correct conclusion.

For every reflecting mind must know, that after a farm becomes so impoverished, by a series of exhausting crops, and exhausted of all its nutricious qualities, which artificial aid only will restore, that it requires all the knowledge and skill of the most profound and scientific to restore, in part, the soil to the state which nature gave it; and even then, it requires the most systematic and judicious course of management to accomplish such an undertaking. A farmer should have more knowledge.

But I would not be understood that he should be a college learned man, nor have him pursue a classical course of study. But he should understand the sciences, particularly philosophy, chemistry, botany, geology, &c. By pursuing the sciences, the powers of the mind are unfolded and drawn out into action, and thereby we are rendered close and profound thinkers, critical and scientific investigators, and close and exact reasoners. And furthermore, there is a pleasure in pursuing the sciences which none but those who have experienced it, know how highly to appreciate. If a person becomes well versed in the sciences, he enjoys many pleasures, to which he who is contented to remain in ignorance, must ever remain a stranger. It matters not whether an individual designs to occupy some conspicuous station, or to follow the humble occupation of an agriculturist, he needs a well cultivated mind. He needs that knowledge which will enable him to learn by actual experiment, what soils are better adapted to the growing of wheat, &c.

He should know by what means he can restore a worn out farm to its former fertility, which will be the least expensive. He should know the nature of every plant and in what locations they will thrive most habitually, what is the preponderating ingredients that composes them.

The sciences unquestionably reflect a vast amount of light on these, which are as eye, holden laws to the majority of farmers, which would if rightly appreciated, be productive of an infinite amount of good. And besides there always appears to a scientific mind, even in the smallest plants something that is calculated to expose the mind, and which strikes it with awe.

A. E. A. E.

Salt for Stock.

Cattle of all descriptions, away from the sea board, should be furnished liberally at this season with salt. It has a powerful tendency to correct the bad effects of green fodder, and is highly advantageous to the animals health. It is an excellent plan to have boxes constructed to a shed or out-building, where it may constantly be kept, and where the cattle can have free access to it at all times. Swine that are kept mostly on fresh food, such as roots, apples, &c., with but little seasoned food, require salt as often, and are as fond of it in its simple state, & as much benefitted by it too, as the sheep or cow. We have found, by recent experience, that a store hog, confined to fresh food, will eat an average of one pint of salt per week. Farmers would do well to attend to this propensity in their dependants, as by the free use of salt, any of those fearful diseases, to which hogs are subject during their confinement, would be ameliorated.—*Yankee Farmer.*

From the Genesee Farmer.

Wintering Bees.

Mr. Tucker—Agreeable to your request, I called on Mr. Eggleston, and obtained from him the following statement of his method of wintering bees, and the success attending it.

In the fall of 1837, he buried 30 or more hives, and the following spring they were taken out without the loss of any. In 1838 he buried 10 hives, with the same success, but lost 7 or 8 hives of bees that stood in his bee-house through the winter. He says that he finds very few, or no dead bees under his hives that are buried, and that they winter on much less honey than when left in the house; some small swarms have lost but 3lbs. in weight in wintering, and the largest but 10lbs. He has buried his bees or some of them, each year, for four years past, and has not lost a swarm that was buried, and shall hereafter bury all that he intends to winter; he has now about 40 swarms. Another fact—those that are buried do much better, and swarm much earlier in the spring.

Mr. Eggleston's method of burying his bees, is to dig a shallow trench in the ground, long enough to set the No. of hives he wishes to bury, with a gentle slope in the trench, to carry off the water, if there should be any collect, and then place the hives in the trench, raised a little from the ground, by a small stone under each corner of each hive, then covers them with straw and lastly with dirt, to use his expression, as you would a pile of potatoes, so deep as not to freeze under the hives.

As to the success of Mr. Eggleston in preserving bees, as described above, there can be no doubt, as it is known to all his neighbors, who (if necessary) will certify to the facts as stated.

Yours respectfully,

ANSON ANDREWS.

Reading, Aug. 20, 1839.

Knowledge.

It is a mistaken notion which is entertained by many, that in order to make any considerable advancement in knowledge, it is necessary that their whole time should be devoted to study—that manual labor should be abandoned, and that the literary aspirant's only hope for success is in gaining admittance to some profession. Nelson teaches no such doctrine—experience proves no such doctrine. To practical, hard-working mechanics and farmers is the world indebted for many of the brightest literary gems and most profound and scientific treatises extant. Witness our Burrit—the Blacksmith—of the present day—our Franklin of olden times—Bloomfield, Burns, Aikenside, and a host of others. We trust the day is not far distant when notions so incorrect and mischievous will cease to exist, and when we may point to those who are toiling in the field and the workshop as men distinguished for their literary attainment and efforts.—*N. B. Mechanic & Farmer.*

Care of Farming Tools.

We believe it may safely be asserted, that the farmer in a course of years sustains as much loss, or is put to as much expense in procuring tools, by their decay in consequence of needless exposure, as from their actual wear on the farm. How many are the instances in which the farming implements, the plows, harrows, roller, &c., instead of being carefully housed when their use for the year is over, are left in the fields, or peradventure drawn up in battle array in front of the house, occupying a goodly portion of the road, and when covered with snow, forming most convenient places for breaking horses legs, tearing of shoes, &c. &c. Perhaps, in addition to these, are sundry wagons, carts, hay racks and other necessary things, like the former, exposed to the decay which must result from exposure to the rains, the freezings, thaws and snows of winter. Now, one such season of exposure does more to weaken the wood of these implements, promote decay, and render new purchases needful, than their ordinary wear on the farm, with careful usage, and protection from the weather. As a general rule, it may be remarked that no implement, tool or carriage of any kind should be exposed when not in use. Those not wanted in the winter should be secured from the weather during that time; and so with those not required during the summer season, as sleighs, sleds, &c. The skillful, thrifty farmer is known by his attention to the minor points of agriculture, by his care to save, as well as to acquire; and he who neglects the lesser things cannot fail to find the drawback on his profits large and constant.—*Genesee Farmer.*

Experiments.

Forty years passed away after the Spinach was cultivated by a few of the wealthy, before it was offered in the city markets in the United States. Rhuburb or pie plant, was almost as long coming into favor, and the Tomato which is one of the most wholesome and grateful of vegitables, is yet but partially known among farmers. We know a farmer who only a year or two since, destroyed tomato vines for fear the fruit would poison his children and pigs. History tells us, the French physicians condemned potatoes as poisonous, after they had been extensively used a hundred years. Our finest fruits have been produced by experimenting with trees which bore what was unpalatable in a wild state, and even some of our most splendid flowers, when in their native forests, are by no means sightly. The Empress of China ascertained the *modus operandi* of making silk by experimenting with disgusting worms, on the mulberry leaf, and may we not suppose, experiments will yet bring into use many things more universally rejected. Let no one be afraid to experiment, for it has been by experiments, all discoveries in the arts and sciences have been made.—*Ten. Agr.*

Ice on door steps, may be easily removed by throwing salt upon it, which will cause the ice to crack to pieces.