

and rendering more rational and elevating, the primitive and healthful pursuits of the tillers of the soil.

Let every farmer who has a son to educate, believe and remember that science lays the foundation of everything valuable in agriculture.—*Exchange paper.*

Science, i. e. knowledge, is just as valuable to a farmer as to a lawyer, a clergyman, or a physician. Ignorant men practice law and physic, and preach—after a fashion. Sometimes they make money. The same thing may be said of ignorant agriculturists. Nevertheless it is quite true that knowledge—education—learning, if you please—contributes as much to the elevation, prosperity and happiness of him who directs the plough, as of any other man.—*Rochester American.*

That knowledge is necessary to him who would succeed in business of any kind, none can or will deny. That the same kind and amount of knowledge and mental discipline are requisite for success in the several callings enumerated above by the editor of the American, few, if any will claim.

It is a popular notion at the present day to urge that everybody must know something about every thing. If any one undertakes to follow out this notion, he will find in the end that he knows but little of any thing. It requires no little time and effort to know every thing about any thing, even the most limited subject.

What folly then to urge, as is not unfrequently done at the present day, that a farmer needs to master the sciences of Chemistry, Geology, Mineralogy, Botany, &c., &c., with vegetable and animal Physiology,—Latin and Greek and Mathematics, and other specific branches of science too numerous to name, in order that he may practice farming successfully.

That knowledge is a good thing and is desirable for all, who will question? That a knowledge of the science of Chemistry is absolutely necessary to the successful practice of the Art of Agriculture, we deny.—To acquire a knowledge of agricultural chemistry and vegetable and animal anatomy and physiology, in a sufficient degree to enable a farmer to conduct his labor in strict harmony with the laws of Nature, as developed and demonstrated by these sciences, would require close study and experimenting for many years—more than are ordinarily allotted to man in these latter ages of the world, and stronger mental powers than the majority of mankind possess. Dr. Liebig, with the unusual natural capacity which he possesses for, and his undying enthusiasm in the study of the science of chemistry, has not yet, according to his own views, mastered the elements of this branch of science to which he has thus far devoted his life. And with all his theoretical and scientific knowledge of agriculture, we doubt very much whether Dr. Liebig would succeed in practical farming, as well as some of our Monroe county farmers, who never looked into a chemistry and perhaps have pledged themselves never to do such a bookish act. Here, then, we have two men, each successful in his vocation, eminently so.—The one is devoting

his life to the science of agriculture, and the other to the art.

The knowledge of science is one thing—one kind of knowledge—the knowledge of art is another and a different sort of knowledge.

Art is the application of knowledge to effect a desired purpose. Music, for example, is both a science and an art. And there are multitudes of excellent singers who are as ignorant of the science of music as many of our best farmers are of the science of chemistry. And, on the other hand, there are those who are deeply read and skilled in the science of music, to whom, should they attempt to sing, Dodd's epigram would apply with great force :

"Swans sing before they die: 'twere no bad thing,  
Should certain persons die before they sing."

The art of farming, and consequently the success, depend more on personal observation and experience than on books; not that we discard books—no, by no means—neither would we substitute them for observation and experience.

Your success as a farmer depends vastly more upon the knowledge of the art of agriculture, than of the science—the one is within the reach of all—the other can be enjoyed only by your Liebig's, your Norton's and your Emmons's. These doctors are ever willing to instruct you in the manipulations of yours, the noblest of arts.

In what we have written here we are not to be understood as opposing the most thorough liberal course of agricultural education;—but as opposing the notion that no man can succeed as a farmer without being an agricultural chemist. There is but one Liebig among the Germans—but one Boussingault in France—but one Johnston in England, and but one—in America. Every farmer should, and may, without the knowledge of these distinguished swans, derive aid in the practise of his useful art, from their excellent writings.—Let all do so—and no one would rejoice more than we, to see every farmer a good practical chemist—but as this is entirely impracticable, we have sought in what we have written, to demonstrate that a man may be a good, thorough, and successful farmer, without being a learned chemist.

W.

REMARKS.—Without fully endorsing the above article, we must admit that it contains much truth. There is no doubt that some writers on chemistry claim too much for their favorite topic—thus taking the opposite extreme of those who reject all science in farming. They depend too much upon science alone—which our correspondent, who properly represents a numerous class of strong-minded farmers, is as far wrong in depending exclusively upon the results of observation and experience. We hold that science and art should be combined—that farmers should not only observe and experiment, but avail themselves of the knowledge to be obtained from the investigations of others. The subject is a suggestive one, and we may hereafter take occasion to discuss it more fully.—*Ed.*