

accurately made and reported shall advance the knowledge of tillage beyond where it has stood for many years." There is still the same deplorable lack of originality in the literature of the farmer.

The query at once presents itself, how is this to be done? Not by reading the records of the past alone, however valuable they are, but by observing with critical care all the phenomena connected with vegetable and animal physiology, in relation both to the earth and the atmosphere, including everything that affects the condition of domesticated animals and cultivated plants. Books contained only the known, and so far as their contents are valuable and useful they report the exact processes of nature in regard to the subjects discussed. Let the reader learn to discriminate therefore between knowledge and theory; in doing so he will soon learn that there is a wide difference between knowledge and theory, between experiment and hypothesis, between fine talking and writing and working in the field, between actual observation and predictable assertion.

In christianity faith is a fundamental, and therefore an indispensable element. But in physics demonstration entirely precludes the necessity of faith, and therefore the reader of an agricultural paper desires, and especially so if he is a practical farmer, to learn what a man knows, not what he believes, or what he asserts from hearsay. Neither by many or by few words does a writer commend himself is what they desire, whether it be conveyed in many or to the real hungerers and thirsters for knowledge. Truth, few words. Some pride themselves on short articles, seeming to convey the impression or conceit that because they write short articles, *ergo*, they are good; also that long articles, because they are long are worthless. Such, however, is not the decision of the analytical reader, for he learns to judge of the contents of a paper not by the length of its articles, but by their quality. What a man knows, not what he believes or has heard, is what the farmer wants and seeks by reading.

The advancement of farm literature must depend upon the observations of practical farmers, and not upon the hypothetical speculations of mere theorists, writers or lecturers who know nothing practically concerning the subjects they write or talk about.

What would a city schoolmaster say of a farmer who never taught school a day in his life, who should write an essay on school keeping, dictating how a school should be organized and conducted? A way with such nonsensical speculations, would say the practical teacher. Before undertaking to teach others, first learn by experience in the schoolroom what cannot be learned anywhere else; then instruct the masters. In such a decision the teacher would be right.

But to reverse the picture. Suppose a city schoolmaster, known as the principal of a select school for young ladies, should attempt to write or compile an essay or manual on practical farming. What would the farmers be likely to say of it? They would say, just what practical schoolmasters would say, of those who know nothing practically about school-keeping, yet attempt to dictate by lectures or essays how to conduct a school. Just for a moment contemplate a city schoolmaster attempting to instruct practical farmers on the rotation of crops. *Ne sutor ultra crepidam*, is a Roman maxim of general application and at once suggests itself. It is quite as absurd for a schoolmaster to teach the practical farmer the niceties of the art of conducting a farm, or of economical agriculture, as it is for the farmer to attempt to teach the practical schoolmaster the art of conducting a school.

Did Mr. Bakewell, an Englishman, and the prince of stock-breeders learn his art from a schoolmaster's manual on farming? Did the Messrs. Colling produce the improved Short-horns in a similar way? Or was it not rather by observation and experience united. They were careful observers and experimenters; and thus the Messrs. Colling and Mr. Bakewell produced results that have proved their claim to the noble honor of being benefactors of mankind. They did something to advance the practical art of cattle and sheep breeding. Men of like spirit and enterprise are now wanted in every other department of farming.

He who by experimenting learns how to grow the greatest amount of wheat, rye, corn, barley or oats per acre, with the least cost per bushel, will then be able to teach what every farmer wishes to know and what no farmer now does know. He also in the same way teaches how to grow annually that crop which is most profitable without regard to rotation of crops, by application of suitable fertilizers, will be entitled to a place on the scroll of fame, by the side of Bakewell and Colling, as a benefactor of his race.

To the same honor he will be entitled who teaches the cheapest method of making beef, mutton, pork and wool—any or all of these staple products. These lessons can only be learned by experimenters in the field and in the garden, among herds and flocks, and in breeding and feeding. Facts thus developed will furnish the material for making the science of agriculture, when they are all known. The facts, the possession of practical farmers to day, they have never found their way into any book or paper, are worth infinitely more to practical and economical farmers, than all that have ever been printed, from the times of Cato and Columella down to the present time.

Farmers! will you furnish facts for the Country Gentleman, no matter how common, for