STEPHEN'S "FARMERS GUIDE TO SCIENTIFIC AND PRACTICAL AGRICULTURE."

Mr. Henry Stephens, of Edinburgh, the author of that excellent work "The Book of the Farm," has published the 1st Volume of a work under the above title, "detailing the labors of the farm as they successively occur." An arrangement has been made to republish this work in the United States from the stereotype plates of the original; Professor Norton, of Yale College, undertaking to adapt the work to farming operations on this Continent. We have had the first No. of this republication laid on our table by Mr. Maclear, bookseller of this city, and we have no doubt the entire work will be a most valuable acquisition to the Farmer's Library. Every thing we have seen from the pen of Mr. Stephens bears the stamp of a mind well versed in all the practical details of the farmer's art, and possessing a most accurate knowledge of the improvements and discoveries which science has so largely yielded. Professor Norton's contributions will be in the shape of an appendix to the several parts of the work; a clumsy arrangement which could not very well be avoided. The author goes into the minutiæ of all important operations which, of necessity, swell the work to a large size; but it will be a library in itself, and although many of his directions will be quite inexplicable to Canadian Farmers, yet every line may be read with profit. The intelligent agriculturist will easily distinguish those methods of culture, crops, &c., suitable to the soil and climate of this country from those recommended for Scotland, and to the uninitiated and unskilled, we trust the explanations and additions of the American Editor will make every thing plain.

We shall from time to time extract for our readers such passages as we may deem most useful, but we hope they will nevertheless buy the work itself. Village, Township, and School Libraries should secure this book as soon as possible. Mr. Maclear will, we dare say, be most happy to take orders.

The following passage may be read with some profit by those who cannot see the advantage of Agricultural Schools, or a system of special instruction for farmers' sons who intend to adopt their father's profession. We may remark that it is a frequent practice in the old country to place young men who are intended for farmers, for two or three years with some good practical Agriculturist to be taught the business, and Mr. Stephens seems to have had these *pupils* in his eye (we beg pardon for the pun), when he wrote his book.

ON THE BRANCHES OF SCIENCE MOST APPLICABLE TO AGRICULTURE.

I believe I have said enough on the best means, in existing circumstances, of acquiring a thorough knowledge of practical agriculture: it is now incumbent on me to indicate those branches of science which will most enlighten the mind of the pupil for the most ready appreciation of agricultural practice; and I may, perhaps, excite general surprise, when I state that no art bears so close a relation to so many branches of science as agriculture.

Indeed agriculture may perhaps be considered one of the experimental sciences, as its principles are no doubt demonstrable by the test of experiment, although farmers have not yet attempted to deduce principles from practice. The necessity for such a deduction is, no doubt, the less urgent, that husbandry is usually pursued as a purely practical art; and the facility of thus pursuing it successfully, of course renders practical men indifferent to science, as they consider it unnecessary to burden their minds with scientific results, whilst practice is sufficient for their purposes. Could the man of practice, however, supply the man of science with a series of accurate observations on the leading operations of the farm, the principles of these might be truly evolved; but I conceive the greatest obstacle to the advancement of scientific agriculture is to be sought for in the unacquaintance of men of science with practical agriculture. Would the man of science become acquainted with practice, much greater advancement in scientific agriculture might be expected than if the practical man were to become a man of science; because men of science are best capable of conducting scientific research, and, being so qualified, could best understand the relation which their investigations bear to practice; and, until the relation betwixt principles and practice is well understood, scientific investigation, though important in itself, and interesting in its results, would tend to no practical utility in agriculture. In short, until the facts of husbandry are acquired by men of science, these will in vain endeavour to construct a satisfactory theory of agriculture on the principles of the inductive philosophy.

If the science of agriculture in its present position be thus correctly represented, it may be expected to remain in an incipient state until men of science become practical agriculturalists, or, what would still prolong such a state of lethargy, until farmers acquire scientific knowledge. It is certainly remarkable that so few scientific men were for a very long period induced to subject agricultural practice to scientific investigation; though of late many, both at home and abroad, have devoted a portion of their time to such a study, and which has already afforded abundant proof, that extensive as the field of research is, it has only to be occupied by numerous observers to produce results interesting alike to the man of science and the man of practice. The long neglect of agriculture by scientific men may perhaps have arisen from the circumstance of its having so intimate a relation to almost every physical science, so that until all its relations were first investigated, no sufficient data could be obtained for a satisfactory explanation of its practice. A short review of the actual relation which the physical sciences bear to agriculture will render this suggestion the more probable.

The sciences which agriculture most immediately affects are mathematics, natural philosophy, chemistry, natural history, comparative anatomy, and veterinary science. Of mathematics, the most useful parts are geometry and trigonometry, and the application of these to the measurement of surfaces and solids. Without a knowledge of mathematics no one can understand