

and J. C. Tatlow. All the articles digest a relatively voluminous literature into well-written, readable, and concise discussions.

However, there is a vast area for future volumes in this series, and fluorine chemists will be looking forward to the appearance of each succeeding volume. The series is certainly to be recommended to workers in the field and to chemists in general.

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Readings in the History of American Agriculture. Wayne D. Rasmussen, Ed. University of Illinois Press, Urbana, 1960. xi + 340 pp. Illus. \$6.50.

God Speed the Plow. The coming of steam cultivation to Great Britain. Clark C. Spence. University of Illinois Press, Urbana, 1960. 183 pp. Illus. \$4.75.

Power to Produce. Yearbook of Agriculture, 1960. U.S. Government Printing Office, Washington, D.C., 1960. 480 pp. Illus. \$2.25.

Harvests and Harvesting through the Ages. Norman E. Lee, Cambridge University Press, New York, 1960. viii + 208 pp. Illus. \$2.95.

Readings in the History of American Agriculture contains some of the sources and documents of American agricultural history. The 52 selections include such items as a 16th-century account of Indian farming, a description of Jethro Wood's patent application for his plow, and analyses of how World War I affected agriculture and how artificial breeding altered dairying. Nearly every important aspect of American agricultural history is covered. Short, informative essays introduce the selections and give the background to, and the results of, the events covered by the documents. Unfortunately, and perhaps unavoidably, the essays do not always provide a continuous narrative link between the documents. Furthermore, many odd or archaic technical terms might have been defined in footnotes. Except for the 16th- and 17th-century documents, however, the illustrations help make things clearer. A fairly comprehensive chronology of American agriculture is at the back of the book. This generally useful outline also provides some continuity for the whole collection. The

book emphasizes the scientific and technological development of American agriculture.

In *God Speed the Plow*, Clark Spence traces the efforts of Britons to plow and cultivate with steam-powered machines. The book covers the years from 1618 to 1918, but most of the story takes place in the 19th century. Methods of using steam power centered on (i) stationary engines, (ii) traction engines, and (iii) tractors with powered earth-cutters. Of these, the stationary engines proved to be the most practical. In Britain, at least, stationary engines always outnumbered tractors about 10 to 1. Spence's account of success and failure is told in adequate detail. He does, however, slight the general technical and economic conditions of the times. Thus, the reader may wonder why a 10 horsepower engine had to weight several tons, and why, even so, it might be profitable to own one. Otherwise, this is a thorough, interesting, and abundantly illustrated monograph.

Power to Produce, a yearbook of the U.S. Department of Agriculture, concentrates on present ways of using power, particularly power derived from internal combustion engines and electric motors. The book also covers some of the history of these devices. Although it is a collaborative effort, the book is still remarkably even in style. It appears to have been written primarily, but not exclusively, for an urban audience. Farm methods and machines are explained in detail. The authors intentionally make little effort to cover any other scientific practices or discoveries. The essays tend to repeat information given in other chapters, but this is probably unavoidable. Although the book can be read straight, it was apparently designed as a reference, to be read piecemeal. How does a potato digger work? How did the tractor evolve? Without using jargon, the authors answer these and a host of other questions. Altogether excellent.

The brief *Harvests and Harvesting through the Ages* was written primarily for children (12 to 16 years of age), and I recommend it for them. It is not a childish book, however, and might be read by adults who want a review of world agricultural history. The book covers far more than just harvesting, although it deals mostly with grain production and processing.

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Paléontologie Stratigraphique. Henri and Geneviève Termier. Masson, Paris, 1960. 515 pp. Illus. NF. 148.

Atlas de Paléogéographie. Henri and Geneviève Termier. Masson, Paris, 1960. 99 pp. Illus. NF. 16.

The indefatigable team of Henri and Geneviève Termier continues to turn out an almost incredible amount of synthesis and compilation in the field of historical geology, taken very broadly. Three volumes of their *Traité de Géologie* have appeared, and others are in preparation. In the meantime they have presented some of the same material in other forms, or for different audiences, and are making related but distinct compilations in several fields. Their *Paléontologie Stratigraphique* is a major work in itself. The purpose, translated from their own words, is "to give the reader an exact picture of the vegetable and animal population of our planet in each of the geological periods that have elapsed since about 500 million years ago."

For each geological period or (in the Cenozoic) epoch a table of its subdivisions is given, usually at the level of stages in European terminology, and its life is summarized in words. The floras and faunas, first marine and then terrestrial as appropriate for the given period, are then reviewed succinctly, telegraphically as the authors say, but with much detail, usually to families and often to genera. Each chapter ends with tables of paleontological zones, presented in terms of different groups of organisms and for various parts of the world. As each major group appears in geological sequence, it is taxonomically characterized and summary classifications are sometimes, but not consistently, given. The illustration is extremely rich, with more than 3425 different figures, mostly line cuts of individual fossils redrawn from innumerable primary and secondary sources. Little attention is given to detailed anatomy, and comparatively few figures have anatomical labels.

A book should be judged, first of all, in the light of its authors' intentions. Some errors of fact and many disputable points of opinion are quite unavoidable in an undertaking so very complex, but it can be said that the authors have carried out their own intention well. The extent to which the result corresponds with a felt need depends on each prospective reader. For some the book may seem to fall between two stools: neither a fully ade-