Book Reviews

USING COMMERCIAL FERTILIZERS
By Malcolm H. McVickar. Danville, Ill.: The Interstate Printers
and Publishers. 208 Pages (illustrated). 1952. $3.00.

This book represents a carefully prepared treatise covering
mainly the practical aspects of commercial fertilizer production
and usage. Each of the fertilizer nutrient elements is covered in
considerable detail. Secondary and trace nutrient elements are
considered also. An excellent discussion of mixed fertilizers is
provided.

Practical problems of commercial fertilizer usage such as meth-
ods of application, equipment for fertilizer application and eco-
nomics of fertilizer usage are considered. Special problems asso-
ciated with fertilizer usage such as soil conservation, animal nutri-
tion, and special applications of chemical fertilizers are discussed.

An excellent glossary of fertilizer terms is provided. The gloss-
sary should be especially helpful in answering questions relative
to fertilizer terminology.

The text should prove especially interesting and useful to high
school students of vocational agriculture, for short course students
in our agricultural colleges, and for all laymen in various agri-
cultural enterprises because of the practicality of the chemical
aspects of commercial fertilizers is omitted. Many technical
work in agricultural professions also will find the book
very helpful.—F. W. Smith.

JUTE SUBSTITUTE FIBRES
185 pages (illus.). 1952.

The subject material, Bimili-jute, roselle and aramina as jute
substitute fibres has been well selected, but to American workers,
these fibres will be better known as kenaf, roselle and Urena. The
book is written from a broad point of view to include the research
and development of these fibres in different parts of the world,
including such material as is available from Russian and Indo-
Chinese sources.

The work done in Florida is noticeably absent, and the reviewer
feels that greater detail should have been given to work done
by the Dutch in Java.

The illustrations, plates 14 and 15 on ramie defoliation, are
irrelevant to the subject matter of the book. Plate 53 on the root-
knot nematodes of kenaf might well have been included under
the discussion of kenaf rather than Urena.

Mr. Haarer has written this book at a time when the research
on jute fiber substitutes is under a state of rapid change and
development. While there is a need to bring past research together
in a present day publication, one may expect considerable change
within the near future.—E. O. Gangstad.

ADVANCES IN AGRONOMY, VOLUME IV
Edited by A. G. Norman; prepared under the auspices of the
American Society of Agronomy. New York: Academic

In a preface dated September, 1952, the editor, A. G. Norman,
states that this volume continues the policy of presenting "articles of
a review or progress report nature . . . likely to be of interest
and assistance to a substantial group of the profession. Some
papers may go beyond what is normally considered agronomy . . ."
By this standard, Volume IV is a success. Most of the articles will
appear to agronomists and soil scientists in general while being
valuable to specialists as well. For the pasture specialist, there
are two articles. In the first, "Grassland Agronomy in Australia," H.
C. Trumble reviews the development of pasture management
in Australia with a commendable emphasis on ecology and on
unusual plant nutrient deficiencies. In the second, R. E. Blaser,
W. H. Skrdla, and T. H. Taylor summarize information on "Eco-
logical and Physiological Factors in Compounding Forage Seed
Mixtures."

For those working with field crops, there is a thought-provoking
article on "The Physiological Basis of Variation in Yield" by D. J.
Watson, who calls attention to the significance of leaf growth and
area to yield, and a practical summary on "Vegetation Control on
Industrial Lands" by K. C. Barron.

For the soil scientist, there are three authoritative reviews:
"Type of Soil Colloid and the Mineral Nutrition of Plants" by
A. Mehlich and N. T. Coleman; "Copper in Nutrition," by F. A.
Gilbert; and "Soil Manganese in Relation to Plant Growth" by
E. G. Mould and F. C. Gerretsen.

The statement by N. E. Tolbert and P. B. Pearson, "Atomic
Energy and Plant Sciences" will interest all concerned with crops
and soils.

The remaining article "Soil and the Growth of Forests," by
T. S. Cole attempts to cover all the regions of the United States,
the major species of trees, and the influence of both the soil profile
and the substrata. In developing soils is unadvisedly sketchy and vari-
able in emphasis. This article will be helpful to some soil sci-
entists and to foresters but will be of only passing interest to most
readers of the volume.

Volume IV is interesting and well-written. Citations to previous
work are abundant, theoretical and up-to-date. It will be valued
by anyone seeking a condensed statement of our knowledge in each
of the subjects covered.—R. J. Muckenhirn.

UNDERSTANDING IOWA SOILS
By Roy W. Simonson, F. F. Kiecken, and Gay D. Smith. Dubuque,
Iowa: Wm. C. Brown Co. 142 pages (illus.). 1952. $3.00.

This well-illustrated, very readable account of the soils of Iowa
is excellent. The introductory chapters on soil formation and clas-
sification make the book valuable for students of soils everywhere.
The numerous photographs and three-dimensional diagrams
acquaint the reader with details of natural soil structure, as well
as with typical soil profiles and their landscapes in Iowa. The text
is more than accurate; it is interestingly written. The authors obvi-
ously had a good time doing it, and have succeeded in making the
soils of Iowa understandable to the general reader.

More than half of the book is devoted to describing the soils of
the state by groups, called soil associations, of which there are
21. Each soil association is treated in a separate chapter which
gives a picture of the major soils in the landscape, their present
uses, and the special management practices suited to each soil type.
The landscape of each soil association has a characteristic field
and road pattern, and a typical placement and appearance of farm-
steads. Finally, the reader’s attention is focused on the precautions
which must be taken by the farm operator to protect each soil
from damage and to maintain its productivity far into the future.

The authors have not limited themselves to reporting facts
about the soils of Iowa, but have shared with the reader the refreshing
spirit of discovery which soil surveyors experience as they explore
new the soil which “in all its varieties and kinds is often taken
for granted.” For example, we read that the Cresco-Kasson-Clyde
association contains “a number of small areas of grayish soils”
which “have been observed during falls trip but have not as yet
been studied, defined and named.” Soil classification is obviously
a young scientific discipline, and this book is an unusually clear
presentation of its findings in Iowa over the past 50 years.

In the appendix are tables of pertinent laboratory data on repre-
sentative soil profiles, a bibliography, a glossary of terms, and an
index. There are several typographical errors in this first edition.
—FRANCIS D. HOLE.

OUR GARDEN SOILS
232 pages. 1952. $4.00.

Our Garden Soils is primarily for the home gardener who has
a problem with his garden soils. Whether the soil is too thin,
too sandy, too wet, too dry, too clayey, or too infertile, the principles
for overcoming and working around these difficulties are discussed
in “down to earth” language in this book. In addition to telling
what should be done to overcome a given handicap, it tells why
persons is important and how to do it.

The author is chief of the Division of Soil Survey, Bureau of
Plant Industry, Soil and Agricultural Engineering, U.S.D.A. The
author believes that one can have a good garden on almost any
kind of soil by following the principles outlined in this book.