

## Reviews and Abstracts

**The Golden Delicious Apple in Pennsylvania.** 1970. By C. S. Bittner, G. M. Greene, C. W. Hitz, B. W. Kelly, G. D. Kuhn, F. J. McArdle, D. H. Petersen, C. W. Porter, C. M. Ritter, R. C. Tetrault, L. D. Tukey. Circ. 547, Penna. State University.

Status of the Golden Delicious apple in Pennsylvania is described. Costs of production and management practices for this variety in Pennsylvania are discussed. Diseases to which Golden Delicious is susceptible are mentioned. The special handling practices required for this variety after harvest are also described. A very practical color chart (in detached form) is provided for use in determining the proper time to pick Goldens.

With regard to clonal selections, it is pointed out that the best solution to the problem of russetting with Golden Delicious is to plant on relatively high ground and provide "proper nutrition," rather than to rely on planting strains of Golden Delicious which are reported to be resistant to russetting.

—G. M. Kessler

**Plant Agriculture.** 1970. Edited by J. Janick, R. W. Schery, F. W. Woods and V. W. Ruttan. W. H. Freeman & Co., 246 pages, 226 illus. \$10 (clothbound), \$4.95 (paperbound).

Essentially, this book is a collection of articles originally published in *Scientific American* between 1950 and 1970.

It is divided into five parts, namely: Origins of Agriculture, Plant Growth and Development, Plant Environment, Production Technology, and Food Needs and Potentials. The authors of

the various articles are all authorities in their respective fields. Examples of titles and authors are as follows: The Agricultural Revolution, by R. J. Braidwood, anthropologist, Univ. of Chicago; The Control of Plant Growth, by J. VanOverbeek, plant physiologist, Texas A. & M. Univ.; F. W. Went, plant physiologist, Univ. of Nevada; Mechanical Harvesting, by C. F. Kelly, Agr. Engineer, Univ. of Cal.; Food, by N. S. Schrumshaw, nutritionist, M. I. T.

With Agriculture so often under attack in this country and elsewhere, these days, this book serves a good purpose in calling attention to some of the significant scientific and technological achievements of agriculture to-date, and some of its important problems—physiological, technological, and social, which will require the combined efforts of academicians, government and industry, if the peoples of the world are to survive and prosper.

—G. M. Kessler

**Horticultural Research Institute of Ontario.—Report for 1968.** Ont. Dept. of Agr. & Foods, Parliament Bldg., Toronto, Canada.

Our readers will find much of interest in this report. Hutchinson and Bradt report on their study of three peach varieties on clonal plum and seedling peach rootstocks. They note incompatibility of the varieties on the Rutgers Red Leaf seedlings.

Hutchinson's 13-year study of apple-rootstocks is of interest, as is his report on a 26-year old planting of four apple varieties on M VII, MI, MII and seedling rootstocks. The latter experiment indicates that trees

on M VII were poorly anchored, came into bearing about the same time as those on seedling stocks at Vineland.

According to Bradt, peach breeding in the past years at Vineland has stressed hardiness and involved the use of hardy Chinese cultivars as parents. The most promising selections from this program are described.

The recently initiated tart cherry breeding program is described by Tehrani. Objectives are: Montmorency types which mature earlier or later, bloom later to avoid frost, have better fruit color, and demonstrate greater ease of separation of fruit stem from the fruit to facilitate mechanical harvest.

Also worth noting is a detailed evaluation, for processing purposes, of varieties of peach, apricot, plum, sweet cherry, strawberry, and raspberry by Cook.

—G. M. Kessler

**Growing Tree Fruits in the Home Orchard.** 1970. By D. B. Meador, C. C. Zych, C. C. Doll, M. C. Shurtleff, R. Randell. Circ. 1013, Univ. of Illinois.

Every aspect of care of deciduous fruit trees in the home garden is comprehensively described. Variety recommendations are made for apple, pear, peach, nectarine, apricot, sweet and red tart cherries, and plum in Illinois. A list of nursery sources of trees is given, something not usually included in bulletins of this sort. The amateur is advised on how to encourage vigorous young apple trees of varieties such as Delicious to bear sooner than they otherwise would; and, conversely, how to prevent young trees from setting fruit prematurely.

The gardener is told how to recognize the various forms of winter injury, what circumstances lead to such injury, and some of the things one can do to prevent, or at least reduce the incidence of such damage.

This bulletin is very well illustrated with excellent photographic plates and line drawings. The amateur will especially appreciate those in the section on pruning.

Very well organized and well written, this bulletin should prove very useful to the amateur, and an excellent teaching tool.

—G. M. Kessler

**Cultural Practices in the Bearing Apple Orchard.** 1969. By G. H. Obelre and C. G. Forshey. Cornell Ext. Bul. 1212.

This is an excellent up-to-date guide for apple growers in the north-temperate regions of the world. It is a brief, practical presentation of all aspects of apple culture, including soil management, fertilization, irrigation, orchard heating, pollination, fruit thinning, hand and mechanical pruning, and, of course, varieties.

The importance of knowing the growth and fruiting habits of each variety is clearly in the discussion of several phases of production. The authors point out, for example, that the question as to whether or not it pays to irrigate apples depends partly on the physiological response to irrigation of the varieties being grown. It is unlikely that varieties maturing before McIntosh will increase enough in size to justify irrigation in areas like New York. Later varieties like Delicious, on the other hand, are more likely to respond to irrigation.

When thinning chemically, summer varieties such as Lodi and Early McIntosh may be damaged by applications after petal fall, while later varieties may be sprayed with chemical thinners as much as three to four weeks after full bloom.

When it comes to tree training, Rome Beauty and Tydeman's Red present a special varietal problem, because of their droopy habit of growth.

—G. M. Kessler