

NEW UNIVERSITY BULLETINS NO. 43 AND NO. 489

The industry, during 1930, has been enriched by two bulletins from the University of California.

Circular No. 43, entitled "The California Avocado Industry," is a complete revision of and supersedes the former Bulletin No. 365. Prof. Robert W. Hodgson, in this circular, has given evidence of a careful study of the avocado industry as it functions in 1930. Among the many new pages of material are found such headings as "Market Reactions to Varieties," "Marketing," "Costs," "Yields and Returns," "Outlook." New light is thrown on Cross-Pollination on page 51 and on Mexican vs. Guatemalan root-stock on page 13. The book is indeed a valuable contribution.

Bulletin No. 489, entitled "Irrigation Water Requirement Studies of Citrus and Avocado Trees in San Diego County, California, 1926 and 1927," by S. H. Beckett, Harry F. Blaney, and Colin A. Taylor, is a two years' careful study of this important problem. Many interesting conclusions have been made as a result of this study, and the bulletin will be of value not only to the San Diego grower but to every avocado grower in California.

THE STARCH CYCLE OF AVOCADO TREES

A. R. Gee, a senior student under the direction of Cameron, studied the starch content of branches of walnut, persimmon, fig, avocado, and olive trees. Samples were taken at intervals of two weeks from January 21 to April 14, 1928. Although the period of study was too short to permit drawing any definite conclusions regarding the starch cycle in these trees, the indications were that the cycle in the avocado and olive is similar to that of Citrus, while in the walnut, persimmon, and fig, it appears to resemble that of temperate zone deciduous fruit trees. Interesting and perhaps important differences were noted in the regions and tissues in which starch was stored in the different fruits studied.

CHROMOSOME NUMBER

H. van Elden, a graduate student working in the laboratories of the Division, has conducted comprehensive taxonomic, histological and cytological studies on the avocado. He has determined the diploid chromosome number in several of the species of the genus *Persea* to be in all probability 24.