also frequently noted, especially in rosette type plants in which bolting is a normal prerequisite to flowering. Induction to flowering by gibberellins does not occur in short day plants. Gibberellins are clearly not identical with the floral hormone of plants, although they must be related to it. Gibberellins do produce some inhibitory effects, especially on leaf growth and root growth. With respect to stem elongation, gibberellins are clearly different from auxin in mode of action and transport. Gibberellins act more on some genotypes than on others and are most effective on genetic dwarfs and rosette type plants whose stem elongation is essentially nil.

The major applications of gibberellins are speeding of the malting process in the making of beer and in the production of larger grapes. It seems only poetic justice that these materials, originally detected as a fungus product, should have their major beneficial role in the fermentation industries. While gibberellins stimulate the growth of plants over short periods, there are not very many instances in which yields are markedly promoted.

It should be clear that this little volume is a mine of information. While the articles are by now a bit dated, due to the rapid progress in this field, the book is recommended as a primary source of data on gibberellins up to 1960.

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Rubber: Botany, Production, and Utilization. Loren G. Polhamus. 448 pp. illus. Interscience Publishers, Inc., New York, 1962. $14.50.

A book of this kind and quality on rubber has long been needed. This book has eagerly been awaited, and its scope and quality have not disappointed us. One of the World Crops series, which has already given us several excellent books on tropical crops, Polhamus' work is encyclopedic in its coverage. Although some specialists might wish for more detail, it would be difficult to bring this about without unduly lengthening the book, thereby causing it to lose one of its chief characteristics, quick reference. One of the pleasant surprises in this work is the amount of space given over to those rubber plants on which, because they are of very minor or perhaps only historical importance, it is difficult to get reliable and up-to-date information: *Castilla,* kok-saghyz, guayule, etc. In other words, *Hevea* does not crowd out the lesser plants merely because it supplies 98% of today's natural rubber. An entire chapter is given over to the botany of *Hevea, Castilla, Parthenium, Taraxacum,* and other lacticiferous plants. I must congratulate Polhamus for such a crisp and accurate presentation of what is often found to be the most unsatisfactory part of such books on tropical crops. Another interesting feature is the amount of space devoted to the so-called "synthetic rubbers" and to a comparison of their physical and chemical characteristics and of the economics of their production with the natural rubbers. Even vulcanization, its chemical nature and its economic significance, and the problems of manufacturing are afforded chapters. In a final and challenging chapter on the expanding need for rubber, a valuable summary of present research is given. Not the least valuable in the book is the critically chosen bibliography. Polhamus has liberally filled his book with meaningful tables, and the many half-tone illustrations, almost all never before published, add immeasurably to the text.

This book is the summary, as it were, of a life-time devoted to a critical study of the scientific, economic, and administrative aspects of rubber plants. Few persons more qualified to write such a work could be found. As a botanist who has spent a number of years studying the wild species of *Hevea* and related genera, I cannot commend Polhamus' book too highly; and I must say that, for once, I agree thoroughly with the jacket of the book which, in part, claims that this "is a reference source for the specialist, a mine of useful information for those concerned with, but not expert in, the many aspects of rubber technology. It coordinates the many existing technical sources of information and the technical details involved in manufacture. It contains all that most people will ever want to know about rubber."

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