

naval architecture and aeronautical engineering, he was interested in various other fields, such as ballistics, elasticity theory of vibration, mathematics, and the methods of practical calculation.

Among his papers, the following ones seem to be most important for acquainting a reader with his ability.

"On the vibration of steamers" (1906), his doctoral thesis, consists of elegant theoretical analysis, including the most original practical device of solving the fundamental equations using two integrals at the same time. "Motion of a projectile in a resisting medium" (1910) is an article on ballistics in which Yokota showed his beautiful accomplishments in mathematical analysis, especially of elliptic functions. "General expression for stress components in two dimensional problems of elasticity" (1914) is perhaps one of the severest mathematical papers ever put before a Japanese society of engineers up to that time. In "Theoretical consideration of water waves" (1918), he showed that the sea wave was the Stoke's wave rather than the trochoidal wave. "Action of R_o " (1926) is a treatment of the hydrodynamical aspects of the propelling and steering devices of the Japanese boat. "Pressure distribution over the surface of a ship" (1925) is a valuable and exhaustive investigation on ship resistance. The proposal given in "Discontinuous flow past an aerofoil" (1926) must be regarded as the first forerunner of the modern tendency to search for aerofoils with small resistance by means of making the pressure distribution uniform over the upper wing surface along the chord.

Seinen Yokota's invaluable services to engineering education in Japan lasted for about 40 years of his residence at the University of Tokyo. The present experts in naval architecture and aeronautical engineers in Japan have been educated by him, directly or indirectly.

This is a valuable reference concerning naval architecture in the later Meiji and Taisho era and the origin of aeronautical engineering in Japan.

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Sweet Corn. Walter A. Huelsen. Interscience, New York-London, 1954. xv + 409 pp. Illus. \$10.50.

This book is intended to be a comprehensive work on sweet corn, covering the growing, breeding, history, and processing of this important vegetable. The author's knowledge of the corn-processing industry is reflected in a very complete coverage of all phases of the canning industry. More than one-third of the book is devoted to the processing of sweet corn, either by canning or freezing.

For those interested in processing sweet corn, this is an important book. It is unfortunate that it does not include a chapter or two on growing corn for the fresh-corn market, either by the market or home gardener. Recent trends on rapid handling to preserve

original quality could well have been given. Also, the chilling of picked corn to preserve quality could have been covered, and I believe that more emphasis should have been placed on breeding for improved quality.

The book is encyclopedic in nature, covering a wide variety of subjects. This is a strong point but also a weakness, in that all points covered receive about the same emphasis or lack of emphasis. It will be useful as a reference for those already rather familiar with the subject, which is probably its intended purpose.

In general, *Sweet Corn* is well organized, although it is difficult to see the reason for the separation of Chapters V and VI on "Factors affecting germination" and "Physiology of germination, growth, and maturity." Also, the chapter on "Mineral nutrition" might well have been included in the chapter on "The plant and its environment."

The author has covered concisely and accurately the history of sweet corn, including the history of the first corn hybrids and the relative importance of the contributions of both East and Shull to this undertaking. The history of the sweet-corn hybrids for market corn is rather sketchily presented. The chapter on taxonomy and morphology is an interesting one that should be included in any comprehensive work on sweet corn. It is doubtful how much the average reader will gain from this chapter, but at least he should be exposed to it.

Huelsen has attempted a complete coverage of the literature on sweet corn and of the pertinent literature on field corn. In fact, he states that "It is doubtful whether anything of significance has escaped [his] attention." This is a bold statement! I found at least two omissions, one major and one minor. The first, and major, omission is a rather comprehensive bulletin entitled *Sweet Corn Hybrids* [Conn. Bull. 518 (1948)], which is concerned mainly with market garden sweet-corn hybrids; the second, and minor, omission, a reference to the work of Noyes Darling, the first sweet-corn breeder in *The Journal of Heredity* (1944).

I observed a few statements with which I take exception, such as "The objective of W. J. Beal was not to induce hybrid vigor by means of crossing." I went into the work of Beal rather thoroughly, and it is clear that he planned crossing experiments for the sole purpose of testing increased yields of hybrids. Also, most geneticists would not agree that such genes as bt_1 , bt_2 , bt_3 , and sh would be classed as types of female sterility. Also, the statement that "a pure line produced fluctuations just as extreme as heterozygous lines" reflects a rather prevalent attitude but one that does not bear close scrutiny, since the "pure line" may be extremely heterozygous for factors that are not visible externally and for which there has been no selection during the inbreeding process.

The growers of sweet corn, especially those concerned with sweet-corn processing, will find *Sweet Corn* an interesting and useful book.

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