THE HISTORY AND EVOLUTION OF MILO IN THE UNITED STATES

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Milo, a group of Sorghum vulgare Pers., has consisted of an ever-changing number of varieties in the United States during the first 40 years of the present century. Coincident with the first development of agriculture and settlement in the Southwest and until only four or five years ago, milo has been the basic grain crop. The several commercial varieties of milo have comprised 75 to 80% of the grain sorghum crop in Texas, and they have been almost equally as important in Oklahoma, Arizona, New Mexico, California, and southwestern Kansas. This is indicative of the general excellence of adaptation to the region inherent in this group of grain sorghum and the superiority of its several varieties which have come about spontaneously following mutations or have been developed through crosses between the various strains and varieties.

Milo apparently was introduced into the United States as one variety about 60 years ago, but there are now numerous varieties that have originated from no less than seven mutations and recombinations of these mutations. As a result of recent research, the genetic basis for the distinctive maturity dates of the various milo varieties has been disclosed (9), and with the closing of this gap in our knowledge of the important characteristics differentiating the various strains and varieties of milo, it is now possible to reconstruct with some assurance of accuracy the genesis and evolution of these varieties as they have sometimes mysteriously appeared, or even disappeared, during the past half century. It appears now to be worth while to record the very interesting evolution in this plant group which has been taking place, largely spontaneous in nature, but under the eyes of both planters and agronomists. Although little understood or slowly recognized at the time, yet the new forms were readily accepted and utilized to our economic advantage in true American fashion. Not only can the somewhat speculative history of the milo group of varieties now be considerably clarified, but the important role of mutations in the development of crop varieties can be brought into proper focus. Also, it is not unlikely that a similar development is typical of the way varieties of other plant species have come and are coming into existence.

GENETICS OF THE MILO GROUP

The main genetic differences between the varieties within the milo group are brought about by three genes that influence time of floral initiation and therefore duration of growth and size, by one gene that controls the presence or absence of a plant pigment that also shows

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3Figures in parenthesis refer to "Literature Cited", p. 452.