SAP EXTRACTION OF SORGHUM AND THE LOCALIZATION
OF JUICE AND SUGARS IN INTERNODES
OF THE PLANT


The manufacture of sorghum syrup has grown to be an extensive industry among farmers living in regions which are capable of producing sorghum crops. Many farmers in the southern states have their own equipment for the manufacture of sorghum and cane syrup on a small scale. The syrup produced may be intended for their private consumption or it may be retailed locally. Many sorghum growers have become very efficient in producing a good grade of syrup.

The correct time of cutting sorghum plants for syrup has been obtained through practice. This practice, no doubt, has been guided by the extensive and detailed research conducted by the U. S. Dept. of Agriculture (2, 3, 4, 5), and this may have helped to bring the sorghum syrup industry to its present-day significance.

With due regard to work previously reported, certain questions still arise as to the best manner of handling the sorghum plants previous to extracting the juice. For example, Is it advisable to strip the leaves previous to crushing and, if so, how long previous? This would apply both to the interval before cutting and before crushing. Furthermore, Is it advisable to cut the plants and allow them to lie in a pile any length of time before crushing? To answer some of these questions, the present investigation was undertaken and was planned so as to compare stripped with unstripped sorghum plants as follows: (a) Stripped and cut at time of crushing; (b) not stripped at time of crushing; (c) stripped and left standing certain periods before harvesting and crushing; and (d) stripped, cut, and left to lie various periods before crushing. Also, an effort was made to determine the sugar concentration of sap extracted from the various internodes of the plant and to determine the percentage of juice and its sugar concentration obtained by passing plants through crushers the rollers of which were set at different degrees of tension.

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3Reference by number is to "Literature Cited," p. 638.