

VARIETAL PROBLEM WITH SPECIAL REFERENCE TO ITS PHYSIOLOGICAL AND BIOCHEMICAL ASPECTS

BY K. L. KHANNA, F.A.Sc.

(Central Sugarcane Research Station, Pusa, Bihar)

ALTHOUGH nitrogen-yield index has now been tested over a wide range of soil and climate conditions, its actual use in breeding agrotypes that would make less exacting demand on soil has not been given due attention. Nor has any attempt been made to elucidate the manner in which the low-nitrogen potential operates. Further 'quality' as distinct from 'quantity' has remained obscure and the view is expressed that it is the study of the physiology and biochemistry of leaf tissue that promises fruitful results in respect of capture of solar energy as also its best utilization. Dark green leaf is reckoned to absorb more energy compared to its pale green or green counterpart and stimulus to storage of starch or its simpler derivatives is affected by variety of salts applied as part of nutrient solution. 'Early indicator characters' correlated with different ratings of quality are beginning to be recognised, although quantity still largely eludes reliable forecasting. Recent experimental evidence that quality can be considerably improved by spraying specific fertilizing elements on to the leaf tissue confirm at any rate partially the postulate given above. Data gathered so far are given and need for co-ordinated work on a standardised basis at a number of stations located at representative sites is stressed.