

Prasad

Volume 21

July 1999

BANGLADESH
JOURNAL OF
SUGARCANE

BANGLADESH JOURNAL OF SUGARCANE

Volume 21 July 1999

Publication No. 77



BANGLADESH SUGARCANE RESEARCH INSTITUTE

ISHURDI, PABNA, BANGLADESH

BANGLADESH JOURNAL OF SUGARCANE

Volume 21

July 1999

EDITORIAL BOARD

A H M Delwar Hossain , <i>M.Sc. (Ag.) (BAU); M. Sc. (U.K.)</i>	- Editor
Md. Sharifur Rahman , <i>M.Sc. (Ag.) (BAU); Ph. D. (R.U.)</i>	- Associate Editor
Md. Ibrahim Talukder , <i>M.Sc. (Ag.) (BAU); Ph. D. (R.U.)</i>	- Assistant Editor
Md. Zahurul Islam , <i>M.Sc. (Ag.) (BAU)</i>	- Member
A.B.M. Mafizur Rahman , <i>M.Sc. (Ag.) (BAU); Ph. D. (LSU)</i>	- Member
Abdul Awal , <i>M.Sc. (Ag.) (BAU); Ph. D. (LSU)</i>	- Member
Md. Korban Ali , <i>M.Sc. (Ag.) (BAU); M.S. (IPSA)</i>	- Member
M. A. Samad Miah , <i>M.Sc. (Ag.) (BAU); Ph. D. (U.K.)</i>	- Member
S. M. Saiful Hassan , <i>B.Sc. Ag. (Hons.) (BAU)</i>	- Member
Md. Arif-ul-Alam , <i>M.Sc. (Ag.) (BAU); Ph. D. (UPLB)</i>	- Member

EDITOR'S NOTE

It is a great pleasure to arrange the publication of this twenty first volume of the Bangladesh Journal of Sugarcane. This publication is a scientific presentation of problem oriented researches on sugarcane with recommendations to overcome the problems of sugarcane cultivation. The work have been conducted at Bangladesh Sugarcane Research Institute (BSRI), Ishurdi and at its Regional and Sub-Stations and elsewhere in the country. This volume includes one foreign article received from Nigeria.

This volume presents information on Effect of White Leaf Disease on Growth Parameters and Yield of Sugarcane, Residual Effects of Fertilizers on Sugarcane Production, Role of Reciprocal Crosses in Sugarcane Breeding, Influence of Effective Microorganism (EM) on Sugarcane Production, Constraints to Increased Sugarcane Supply in Two Selected Sugar Mills, Effect of Green Manuring as Intercrop on Improvement on Soils, Efficacy of Cake - O-Meal-an Organic Manure, The Inheritance of Five Characters in F_1 Progeny of Sugarcane, Important Variables Affecting Research Productivity, Effect of Nitrogen and Interplant Spacing on the Production of Seedcane, Effect of Planting Time and Seedcane Sources on White Leaf Disease incidence, Path Analysis in Intervarietal Crosses of Sugarcane, Contribution of different Green Manures to Phosphate Nutrition, Effect of Some Fungicides on the Control of Red Rot, Yield Performance of Sugarcane Varieties, Effect of IBA, Kn and GA_3 , Post Harvest Deterioration Losses, Fertilizer Requirement for Sustainable Sugarcane Production, Effect of White leaf Disease in Chlorophyll Content, Effect of different Sources of Settlings on the Yield, Isd 29-A Promising Variety of Sugarcane, Effect of Magnesium and Potassium on Sugarcane, An Analysis of Sugarcane Production of Small-holders in Nigeria, Potential Biocontrol of Sugarcane Stem Borers, Evaluation of Some Sugarcane Varieties Against Smut, Screening of Some Sugarcane Varieties for Gur Production, Role of Environmental Factors on Sucrose Content and Studies on Cane Quality of Promising Clones.

We believe and hope that research results presented and documented in this volume will help to enrich and update the knowledge of the Researchers, Subject Matter Specialists and Extension Personnel home and abroad.

We also believe that the devotion of the young and energetic scientists in bringing out the publication will firmly strengthen the research and extension linkage through the transfer of appropriate technologies to the sugarcane growers and thereby help maximize cane and sugar yield to achieve self-sufficiency in sugar and gur production in the country.

A H M Delwar Hossain
EDITOR
&
DIRECTOR GENERAL

CONTENTS

Effect of White Leaf Disease on different Growth Parameters and Yield of Sugarcane - M. I. Talukder and M. S. Alam	1
Residual effects of Fertilizers applied to Intercrop Potato on Sugarcane Production - M. A. Majid, F. Alam, M. A. Ghafur and S. N. A. Chowdhury	10
Role of Reciprocal Crosses in Sugarcane Breeding -Sk. A. Mannan, M.A. Mannan, A. Awal and S. R. Saha	15
Influence of Effective Microorganism on Sugarcane Production and Improvement of Soil -F. Alam, M. A. Majid, M. J. Islam and S. M. Bokhtiar	19
Constraints to Increased Sugarcane Supply in Two Selected Sugar Mills of Bangladesh - M. H. Kabir and M. M. Alam	24
Effect of Green Manuring as Intercrop on Soils Improvement and Supplement N for Sugarcane Production under different AEZ -M. J. Islam, M. A. Majid, M. A. Rashid and F. Alam	30
Efficacy of Cake -O-Meal-an Organic Manure on Sugarcane Yield - G. C. Paul, M. J. Islam and S. M. Bokhtiar	37
The Inheritance of Five Characters in F₁ Progeny of Sugarcane - Sk. A. Mannan	41
Important Variables Affecting Research Productivity of Bangladesh Sugarcane Research Institute - A. Muhammad, M. M. Islam and A. Halim	47
Effects of Nitrogen and Interplant Spacing on the Production of Seedcane and Germination of Buds - M. A. Majid, F. Alam, M. J. Islam, M.A. Ghafur and S. N. A. Chowdhury	61
Effect of Planting Time and Seedcane Sources on White Leaf Disease Incidence, Cane Yield and Sucrose Content - M. A. Rashid, M.B. Ahmed, S. Rahman and M. Y. Ali.....	67
Path Analysis in Intervarietal Crosses of Sugarcane - Sk. A. Mannan, A. Ghafur, M. A. Mannan and S. R. Saha	73
Contribution of Different Green Manures to Phosphate Nutrition of Sugarcane - G. C. Paul, S. M. Bokhtiar and M. J. Islam	76
Effect of Some Fungicides on the Control of Red Rot of Sugarcane - S. Rahman, M.S. Alam, O.I. Joardar, S.N.A. Chowdhury, A.C. Barma and M.M. Kamal	81

(Continued)

CONTENTS

(Continued)

Yield Performance of Sugarcane Varieties in different Technology-based Demonstration Plots - S. N. A. Chowdhury, M. K. Ali, M. A. Kader, M.O. Gani and M. A. Rashid	85
Effect of IBA, Kn and GA₃ for <i>In Vitro</i> Clonal Propagation of Sugarcane -Sk. A. Mannan and M. N. Amin	89
Post Harvest Deterioration Losses in Some Commercial Varieties of Sugarcane - M. A. Jabber, M. R. Alam, M. F. Hasan, M.A. Ghafur and A. C. Barma	93
Fertilizer Requirement for Sustainable Sugarcane Production under different AEZs Condition - F. Alam, S. C. Saha, S. N. A. Chowdhury and S. R. Saha	97
Effect of White Leaf Disease on Chlorophyll Content of Sugarcane Leaf - M. I. Talukder, M. S. Alam, M.M. Kamal and S. N. A. Chowdhury	101
Effect of different Sources of Settlings on Yield and Yield Parameters of Some Selected Sugarcane Varieties - M. A. Rashid, M.B. Ahmed, S. Rahman and D. H. Scarisbrick	105
Isd 29—A Promising Variety of Sugarcane -S. R. Saha, M. A. Miah, B.P. Podder, S. M. N. Nahar, Sk. A. Mannan and A. Awal	114
Effect of Magnesium and Potassium on Sugarcane in Acid soils of Bangladesh -F. Alam, S. C. Saha, G.C. Paul and M. A. Ghafur.....	118
An Analysis of Sugarcane Production of Small holders in Papa Lanto, Nigeria - O. Olubanjo, O. Oworu and Odu	123
Potential Biocontrol of Sugarcane Stem Borers with Exotic Egg Parasitoid, <i>Trichogramma Chilonis</i> Ishii - M. A. Alam, R. Kundu, M. M. Biswas and M. Begum.....	128
Evaluation of Some Sugarcane Varieties against Smut - A. C. Barma, S. Rahman, M. M. Kamal and R. N. Nice	132
Screening of Some Sugarcane Varieties Suitable for Gur Production - S. N. A. Chowdhury, M.A. Jabber, M.F. Hasan and M. A. Ghafur	135
SCIENTIFIC NOTES	
Role of Environmental Factors on Sucrose Contents in Sugarcane - M. A. Mannan, A. Awal and Sk. A. Mannan	137
Studies on Cane Quality of Some Promising Clones - M. A. Jabber, M. A. Ghafur, M. R. Alam and M. F. Hasan	140