

Volume 9

July 1987

BANGLADESH
JOURNAL OF
SUGARCANE

BANGLADESH JOURNAL OF SUGARCANE

VOLUME 9 JULY 1987

Publication No. 46

SUGARCANE RESEARCH & TRAINING INSTITUTE
(Bangladesh Sugar & Food Industries Corporation)
ISHURDI, PABNA, BANGLADESH

BANGLADESH JOURNAL OF SUGARCANE

Volume 9

July 1987

EDITORIAL BOARD

Md. YASIN ALI , M.Ag., M.S. (Hawaii, USA).	— Editor
A.B.M. MAFIZUR RAHMAN , M.Sc.(Ag), Ph.D. (LSU, USA)	— Associate Editor
M.A. SAMAD MIAH , M.Sc.(Ag), Ph.D. (Wales)	— Assistant Editor
A.H.M. DELWAR HOSSAIN , M.Sc.(Ag), M.Sc. (U.K.)	— Member
SYED ALI IMAM , M.Sc. (Ag)	— Member
ABDUL AWAL , M.Sc. (Ag), Ph.D. (LSU, USA).	— Member
MD. SHARIFUR RAHMAN , M.Sc. (Ag)	— Member
MD.KORBAN ALI , M.Sc.(Ag)	— Member
S.M. SAIFUL HASAN , B.Sc. Ag. (Hons).	— Member

EDITOR'S NOTE

It is a great pleasure to see the publication of the ninth volume of the Bangladesh Journal of Sugarcane. This publication is essentially a scientific presentation of problem oriented research works conducted at SRTI for the country and also elsewhere. This volume also includes five articles from Nigeria.

The present volume of Bangladesh Journal of Sugarcane includes information on tillering & productivity of autumn & summer transplanted sugarcane, performance of some promising clones as plant & ratoon crop, association of yield & quality characters, studies on the control of termites with chemical pesticides, efficacy of liquid fertilizer (agromax) on sugarcane yield, association of some leaf endowments with sugar content, white leaf disease control by hot water treatment, effects of *Meloidogyne incognita* and *Heterodera sacchari* on sugarcane growth, influence of different organic manures on sugarcane productivity, effect of flowering on yield & quality of sugarcane, effective dose of gamma ray for sugarcane mutation, effects of chemicals on red rot & wilt pathogen, quantitative estimate of some morphological characters in sugarcane, effects of soil treatment on sugarcane seedlings, performance of intercropped sugarcane under reduced fertilizer managements, trends & growth patterns in sugarcane area production & productivity in Bangladesh, influence of bag & sett size on germination & vigour of sugarcane settlings, potential of sprouted slip as planting material, relationship between planting depth & growth characteristics of sugarcane, effects of lodging on cane quality and a preliminary study on the effects of zinc on sugarcane.

We hope that the research results documented in this volume will enrich and update knowledge of the researchers, Subject Matter Specialists and Extension Workers home and abroad.

We believe that the endeavour of the young scientists in bringing out the publication will firmly bridge the research and extension linkage through the transfer of appropriate technology to the sugarcane growers and thereby to maximise cane and sugar yield to achieve the self-sufficiency in sugar and gur in the country.

M. YASIN ALI
DIRECTOR

CONTENTS

Tillering and productivity of autumn and summer transplanted sugarcane— A.B.M.M. Rahman, M.A. Matin and M.Y. Ali.	1
Performance of some promising clones of sugarcane as plant and ratoon crops— M.A. Miah, M. Rahman, A. Awal, And M.A. Karim	9
Association of yield and quality characters in sugarcane— G. Olaoye and S.B. Agbana	14
Studies on the control of termites with chemical pesticides— R. Kundu, M.A. Alam, M.M. Biswas, M. Abdullah, and M.A.H. Miah.	20
The efficacy of a liquid fertilizer (Agromax) on yield and its components in sugarcane— O.O. Oworu	26
Association of some leaf endowments with the sugar content of sugarcane— A.B.M.M. Rahman and M.R. Alam.	33
Control of white leaf disease by hot water treatment— S. Rahman, M.A. Malek, A.K.M. Kabir and I. Talukder	37
The effects of <i>Meloidogyne incognita</i> and <i>Heterodera sacchari</i> on the growth of sugarcane— E.O. Salawu	43
Influence of different organic manures on sugarcane productivity— M. Khondaker, M.H. Rahman, M.K.A. Chowdhury and A.H.M.D. Hossain	48
Effect of flowering on yield and quality of sugarcane— O.O. Oworu	53
Determination of effective dose of gamma ray for sugarcane mutation— M.A. Mannan, M.A. Miah, A. Awal, M.A. Karim, and M. Rahman	60
Effects of some chemicals on red rot and wilt pathogens of sugarcane <i>in vitro</i>— M. Iqbal, S.M.N. Nahar, S. Rahman, A.K.M. Kabir and M.A. Malek	65
Quantitative estimate of some morphological characters in sugarcane— S.A. Mannan and M.A. Karim	69
Effects of soil treatment on sugarcane seedlings— M.A. Miah, S.R. Saha, S.M.N. Nahar and A. Awal	73
Performance of intercropped sugarcane under reduced fertilizer management— S.A. Imam, M. Ali, S.M. Moslemuddin and A.H.M.D. Hossain	77
Trends and growth patterns in sugarcane area, production and productivity in Bangladesh— M.H. Kabir	83
SCIENTIFIC NOTES :	
Influence of bag and sett size on germination and vigour of sugarcane settlings— M.A.S. Miah, M.A. Matin and A.B.M.M. Rahman	97
The potential of slip settlings (Rayungans) as planting material— A.B.M.M. Rahman, M.A. Hossain and M.A. Matin	101
The relationship between planting depth and growth characteristics of sugarcane in Nigeria— S.S. Afolabi	104
Effects of lodging on cane quality— M.A. Jabber, M.A. Matin and M.A.S. Miah	109
Effects of zinc on sugarcane— a preliminary study— M.K.A. Chowdhury and M.H. Rahman	112