

**ALL INDIA COORDINATED RESEARCH PROJECT  
ON SUGARCANE**



**TECHNICAL REPORT  
(2016-17)**

**CROP PROTECTION  
(Plant Pathology)**

**Sugarcane Research Station  
Assam Agricultural University  
Buralikson-785 618  
Assam**

**SUGARCANE RESEARCH STATION:: ASSAM AGRICULTURAL UNIVERSITY::  
BURALIKSON-785 618:: P.O. BARUABAMUNGAON:: GOLAGHAT :: ASSAM**  
(Through the Chief Scientist, Sugarcane Research Station, Buralikson)

**Memo No. AAU/ SRS/ Tech-1/**

**dated:**

To,

The Principal Investigator  
Crop Protection- AICRP(S)  
Sugarcane Breeding Institute  
Coimbatore- 641 007  
Tamil Nadu

**Sub: Annual Technical Report (2016-17) for crop protection (Plant Pathology),  
Buralikson center, regarding**

Sir,

I am sending herewith the Annual Technical Report of Crop Protection (Plant Pathology) under AICRP on sugarcane for the year 2016-17 from Sugarcane Research Station, Buralikson for your kind perusal and needful please.

With kind regards,

Your's faithfully

(DevanushiDutta)  
Junior Scientist (Plant Pathology)  
SRS, Buralikson

**No.**

Copy to:

The Project Coordinator,  
AICRP on Sugarcane  
Indian Institute of Sugarcane Research  
Lucknow, P.O. Dilkhusa  
UP- 226 002

Your's faithfully

(DevanushiDutta)  
Junior Scientist (Plant Pathology)  
SRS, Buralikson

## **Plant Pathology**

### **Project 1**

#### **PP 17A: Evaluation of Zonal Varieties for Red Rot**

A total of twenty four (24) entries including one check variety and five (5) standard varieties were evaluated against red rot by plug and nodal cotton swab methods of inoculation using CF 07 and CF 08 pathotypes.

Two (2) IVT (Early) clones, CoP 13436, CoP 13437 and one (1) IVT (Midlate) clone CoP 13438 were rated as MR in plug method and R in cotton swab method to both the pathotypes.

In AVT (Early)-I Plant, CoLk 12207 was found to be R in plug method to CF 07 and MR to CF 08. Other entries were MR in plug method and R in cotton swab method to both the pathotypes.

In AVT (Early)-II plant all four (4) entries viz., CoP 11436, CoP 11437, CoP 11438, CoSe 11451 were rated as MR to both the pathotypes CF 07 and CF 08 in plug method and R in cotton swab method.

In AVT (Midlate)-I plant among the four (4) entries CoLk 12209 was rated as R to CF 07 and MR to CF 08 pathotype in plug method and R in cotton swab method to both the pathotypes.

In AVT (Midlate)-II plant all the four (4) entries viz., BO 155, CoSe 11453, CoSe 11454, CoSe 11455 were found to be MR in plug method and R cotton swab method to both the pathotypes.

Five (5) standard check entries viz., Bo 91, CoP 09301, CoSe 92423, BO 130, CoSe 95422 behaved as MR in plug method and R in cotton swab method to both the pathotypes CF 07 and CF 08.

**Table 1: Evaluation of Zonal Varieties for Red Rot**

Sl. No.	Entries	CF 07			CF 08		
		Plug method	Reaction	Nodal method	Plug method	Reaction	Nodal Method
<b>IVT- Early</b>							
1.	CoP 13436	2.72	MR	R	2.40	MR	R
2.	CoP 13437	3.00	MR	R	3.20	MR	R
<b>IVT- Midlate</b>							
3.	CoP 13438	2.20	MR	R	2.68	MR	R
<b>AVT (Early)- I Plant</b>							
4.	CoLk 12207	2.00	R	R	2.20	MR	R
5.	CoP 12436	2.83	MR	R	3.30	MR	R
6.	CoSe 12451	3.20	MR	R	3.66	MR	R
<b>AVT (Early)- II Plant</b>							
7.	CoP 11436	2.80	MR	R	2.20	MR	R
8.	CoP 11437	2.33	MR	R	2.05	MR	R
9.	CoP 11438	2.50	MR	R	2.45	MR	R
10.	CoSe 11451	2.50	MR	R	2.60	MR	R
<b>AVT (Midlate)- I Plant</b>							
11.	CoLk 09204	2.40	MR	R	2.90	MR	R
12.	CoLk 12209	1.40	R	R	2.73	MR	R
13.	CoP 12438	2.60	MR	R	2.80	MR	R
14.	CoSe 12453	2.50	MR	R	2.10	MR	R
<b>AVT (Midlate)- II Plant</b>							
15.	BO 155	3.00	MR	R	2.40	MR	R
16.	CoSe 11453	2.83	MR	R	2.20.	MR	R
17.	CoSe 11454	2.60	MR	R	3.45	MR	R
18.	CoSe 11455	2.80	MR	R	3.50	MR	R
<b>Local check</b>							
19.	Akipura	6.20	S	S	5.40	MS	S
<b>Standard Check</b>							
<b>Midlate</b>							
20.	Bo 91	3.00	MR	R	2.40	MR	R
21.	CoP 09301	2.40	MR	R	2.30	MR	R
22.	CoSe 92423	2.50	MR	R	2.50	MR	R
<b>Early</b>							
23.	BO 130	2.30	MR	R	2.30	MR	R
24.	CoSe 95422	2.10	MR	R	2.60	MR	R

## Plant Pathology

### Project 2:

#### **PP 22: Survey of Sugarcane diseases naturally occurring in the area on important sugarcane varieties**

Sugarcane genotypes were found to be affected with red rot, wilt, YLD, pokkahboeng and leaf spot in Golaghat District of Assam. Red rot, wilt and YLD were observed in Co 740, Co 997, CoBln 09104. Red rot incidence was varied from trace to 8.82%. Wilt was observed in ratoon crop of *KhanikorJutiaKrishi Pam*, Khanikorupto 18.51%. Trace to 5.66% YLD incidence was noticed in Co 997. Foliar disease ring spot was recorded in CoBln 09103, BO 130, CoSe 12453 upto 24%. Pokkahboeng was also observed in CoSe 11454, CoLk 09204, CoP 13436, BO 130 in tillering stage. But these genotypes regained from disease condition except the genotype CoSe 11451 where Top Rot phase was observed. Banded sclerotial disease was also observed in BO 155 in trace amount.

**Table 2: Survey of naturally occurring sugarcane diseases**

Sl. No.	Disease	Name of the area surveyed	% disease incidence	Varieties affected	Crop stage when observed	Any other information
1.	<b>Red Rot</b>	Khanikor	8.82	Co 740	Maturity	N/A
		Khakandoguri	4.16	Co 997	Maturity	
2.	<b>Wilt</b>	Teliasunari	12.0	CoBln 09104	Maturity	
		Khanikor	18.51	CoBln 09104	Late Maturity	
		Khakandoguri	8.69	Co 997, Co 740	Maturity	
3.	<b>YLD</b>	Madhyamudoi	5.66	Co 997	Grand growth	
		Khanikor	4.00	CoBln09103	Grand growth	
		Khakandoguri	2.00	Co 740	Maturity	
5.	<b>Foliar Disease (Ring spot)</b>	Madhyamudoi	23.33	CoBln 09103	Tillering	
		SRS, Buralikson	24.0	BO 130	Grand growth	
			16.0	CoSe 12453	Grand growth	
6.	<b>Pokkah boeng</b>	SRS, Buralikson	20.0	CoSe 11454, CoLk 09204, CoP 13436, BO 130	Tillering	
		Khanikor	11.11	Co 997	Grand growth	
7.	<b>Banded sclerotial disease</b>	SRS, Buralikson	Trace	BO 155	Tillering	

