

RESULTS OF PLANT PATHOLOGY 2016-17

PP 14(a): Maintenance of isolates of red rot pathogen

Five isolates collected from red rot affected canes of commercially cultivated varieties of different parts of sugarcane growing areas of Nayagarh. The isolates (*Colletotrichum falcatum*) are maintained in oat meal agar by continual sub culturing in every 15-17 days interval. To maintain the virulence, periodically the isolates are inoculated in the host, reisolated from the host and again maintained in the artificial media.

PP 17A: Evaluation of zonal varieties for resistance to red rot

Eighteen entries including susceptible standards were tested against CF4 and CF 6 pathotypes by plug and nodal cotton swab methods of inoculation. Sugarcane clones viz., CoOr 13346, CoA 14321, CoA 14322, CoC 14336, CoV 14356, CoA 14323, CoC 14337, CoOr 12346 and PI 14376 exhibited MR and R reaction to CF 04 & CF06 in both plug and nodal cotton swab method of inoculation respectively. CoA12324 showed MS and S reaction to CF04 and CF06 in plug method respectively. In nodal method it showed R and S reaction to CF 04 and CF 06 respectively. CoA 13323 showed S and HS reaction against CF04 and CF 06 in plug method respectively.

Table: Evaluation of zonal varieties for resistance to red rot - Nayagarh

Sl. No.	Varieties	Reaction to red rot					
		CF04			CF06		
		Plug		Nodal	Plug		Nodal
		Score	Rating		Score	Rating	
IVT- Early							
1	CoA 14321	2.4	MR	R	3.5	MR	R
2	CoA 14322	2.8	MR	R	3.8	MR	R
3	CoC 14336	2.4	MR	R	3.4	MR	R
4	CoV 14356	3.0	MR	R	3.6	MR	R
AVT-Early – I Plant							
5	CoA 13322	2.8	MR	R	3.6	MR	R
6	CoA 13323	7.2	S	R	8.4	HS	R
7	CoC 13337	3.0	MR	R	2.8	MR	R
AVT-Early – II Plant							
8	CoA 12321	3.4	MR	R	3.8	MR	R
9	CoA 12322	2.6	MR	R	3.2	MR	R
10	CoA 12323	4.6	MS	R	5.4	MS	R
11	CoOr 12346	3.2	MR	R	3.8	MR	R
IVT- Midlate							
12	CoA 14323	2.5	MR	R	3.8	MR	R
13	CoC 14337	2.8	MR	R	3.0	MR	R
14	PI 14376	4.0	MR	R	3.8	MR	R

AVT-Midlate – I Plant							
15	CoOr 13346	3.0	MR	R	3.4	MR	R
16	CoA12324	5.0	MS	R	6.4	S	S
Standard Checks							
17	Co 6907(E)	8.4	HS	S	9.0	HS	S
18	Co7219(ML)	8.2	HS	R	8.6	HS	R

PP 17A: Evaluation of zonal varieties for resistance to YLD

Variety	Severity Grade	Severity Scale
CoV12356	1.6	R
CoA92081	2.4	MR
CoC 01061	1.32	R
CoC14336	1.8	R
Co7219	1.52	R
Co12321	1.68	R
CoOr03151	1.76	R

YLD was observed naturally only in these above mentioned varieties in the SRS farm of Nayagarh but the infection is less. But there is a threat of spreading of this disease in sugarcane growing areas of the state because of its sett transmissible nature.

PP 22 : Survey of sugarcane diseases naturally occurring in the areas on important sugarcane varieties

Incidence of red rot was recorded 5-30% in varieties viz. Co 86032, Co 6907, CoOr 03151, CoOr 041512, Co 86249. Ring spot and GSD are predominant diseases in sugarcane and their incidence varies from 10-40%. Pokkah boeng disease was observed in rainy days in 5-10% but plants are recovered after the season. Mosaic is prevalent disease in the areas and incidence varies from 5% to 40%.

**ALL INDIA CO-ORDINATED RESEARCH PROJECT ON SUGARCANE
SUGARCANE RESEARCH STATION
(ORISA UNIVERSITY OF AGRICULTURE & TECHNOLOGY)
AT: PANIPOILA , PO :BALUGAON , Dist : NAYAGARH**

No. 157 / SRS Dt. 30.05.2017

From :

Dr. P. K. Nayak, Ph.D.
Officer-in-Charge

To

The Head & Principal Investigator (Pathology)
Division of Crop Protection
ICAR-Sugarcane Breeding Institute,
Coimbatore-641007(Tamil Nadu)

Sub : Submission of data sheet 2016-17 (Plant Protection)

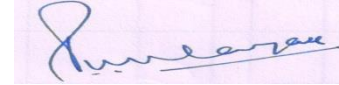
Sir,

In inviting a kind reference to the subject cited above I am herewith submitting the data sheet 2016-17 of Plant Pathology discipline of AICRP on Sugarcane, S.R.S. Nayagarh along with soft copy for your kind perusal and inclusion in the Annual Report.

This is for favour of your kind information and necessary action

With regards

Yours faithfully

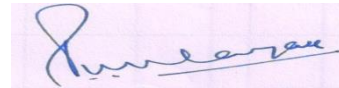


Encl. : As above

(P.K.Nayak)
OFFICER-IN-CHARGE
AICRP(S) S.R.S., NAYAGARH

Memo No. 158 / SRS Dt 30.05. 2017

Copy along with data sheet and C.D. submitted to the Project Coordinator, AICRP(S), IISR , Lucknow ,UP for favour of information and necessary action .



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