Plant Pathology Results 2014-15 Sugarcane Research Station, Buralikson

Experiment No. PP 17. Evaluation of Zonal varieties for resistance to red rot.

The experiment was laid out to find out sources of resistance in sugarcane varieties / genotypes against red rot. For this purpose 21 varieties / genotypes including a local check was raised starting from last week of March, 2014. The canes were inoculated with spores of 10 day old cultures of red rot isolates 'Cf 08' and 'Cf 07'. Inoculation was done by both plug and nodal method during second week of August, 2014. Evaluation of the canes was done 60 days after inoculation. The findings are presented in Table 1.

The disease scoring of the inoculated cane genotypes revealed that no genotype showed resistant reaction to the red rot isolates. Out of the 21 genotypes / varieties CoP11440 and CoSe 11453 showed resistant reaction to CF07 while they were moderately resistant to CF08.Rest of the genotypes showed moderately resistant reaction to both the isolates except CoP 08436 and CoSe11454 which were moderately susceptible to isolate CF08.

Table 1. Evaluation of sugarcane varieties/genotypes against red rot

Sl. No.	Variety/ Genotype	Reaction to Red Rot							
			CF 07		CF 08				
		Plug Method	Reaction	Nodal Method	Plug Method	Reaction	Nodal Method		
IVT (l	Early)								
1.	CoP 11436	2.75	MR	R	2.66	MR	R		
2.	CoP 11437	2.55	MR	R	2.47	MR	R		
3.	CoP 11438	3.20	MR	R	3.00	MR	R		
4.	CoSe 11451	3.75	MR	R	3.80	MR	R		
AVT ((Early) II Plant	1	1	1	ı	1	L		
5.	BO 153	3.00	MR	R	3.75	MR	R		
6.	CoP 08436	3.65	MR	R	4.25	MS	R		
7.	CoP 09452	3.52	MR	R	3.65	MR	R		
8.	UP 09453	3.45	MR	R	3.67	MR	R		
IVT (Midlate)								
9.	BO 155	3.16	MR	R	3.52	MR	R		
10.	CoP 11439	3.42	MR	R	3.20	MR	R		
11.	CoP 11440	2.00	R	R	2.14	MR	R		
12.	CoSe 11453	2.00	R	R	2.20	MR	R		
13.	CoSe 11454	4.00	MR	R	4.10	MS	R		
14.	CoSe 11455	3.56	MR	R	3.60	MR	R		
15.	CoSe 11456	3.25	MR	R	3.33	MR	R		
AVT (<u> </u> (Midlate) I Plant								
16.	CoSe 10451	3.75	MR	R	3.80	MR	R		
17.	CoSe 10452	3.55	MR	R	3.65	MR	R		
18.	CoSe 10453	3.25	MR	R	3.33	MR	R		
	(Midlate) II Plan								
19.	BO 154	3.70	MR	R	3.77	MR	R		
20.	CoP 09437	2.25	MR	R	2.20	MR	R		
21.	Akipura	9.00	HS	S	9.00	HS	S		

PP 22. Survey of Sugarcane diseases naturally occurring on important sugarcane varieties

The survey programme was conducted in various locations of seven sugarcane growing districts of Assam, viz., Golaghat, Jorhat, Nagaon, Karbi Anglong, Kamrup, and Sonitpur. The different cultivars/varieties were examined at random for infection of diseases like red rot, wilt, smut, grassy shoot, rust and other minor diseases like leaf spots. The incidences of diseases as observed are presented in Table 2.

The data on survey of sugarcane diseases revealed that there is no widespread occurrence of major diseases of the crop in the surveyed areas. Leaf spots and mosaic disease was found to be very common in all the surveyed areas. Among the leaf spots, ring spot and brown spots were common. Among other diseases grassy shoot disease was found to be occurring in considerable proportions in Majuli sub-division of Jorhat district. Besides, in the districts Golaghat, Jorhat and Nagaon the occurrence of Pokkah Boeng disease in small proportions was observed.

PP 22. Survey of Sugarcane diseases naturally occurring on important sugarcane varieties

		No.of locations	Disease Incidence (%)								
Sl. No.	District		Leaf spots	Rust	Red rot	Grassy shoot	Smut	Wilt	Pokkah Boeng	RSD	Mosaic
1.	Golaghat	12	25	-	-	-	-	2	3	-	40
2.	Jorhat	7	15	-	-	10	-	-	2	-	20
3.	Nagaon	5	5	-	-	-	-	5	2	-	10
4.	Karbi Anglong	3	5		-	-	-	-	Trace	-	15
5.	Kamrup	5	5	-	20	-	-	15	-	-	5
6.	Sonitpur	3	5	-	-	-	-	-	-	-	5