

remained BB-free under NIST; of 21 genotypes that scored 3 under CIT, only could be scored under NIST. Scores 0-5 were found in 50% of the CIT cases

and 65.2% of the NIST; those 15.2% of the genotypes saved under NIST could include potentially superior cultivars that would have been rejected under

CIT.

Repeated testing of genotypes scoring 0-5 for two more seasons will eliminate chances of escape. □

Changes in ascorbic acid content of rice cultivars due to *Rhizoctonia solani* inoculation and carbendazim application

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During 1985 samba season (Aug-Jan), rice varieties ADT31, CR 1009, AU42/1, IR20, and White Ponni were inoculated with *R. solani* at maximum tillering (80 d old) by single sclerotium method. Fungicide (0.1% carbendazim) was sprayed 3 d after inoculation. Sheath portions of the plants sampled at 3, 5, and 7 d after inoculation and 3, 5, and 7 d after fungicide application were analyzed for changes in ascorbic acid content.

Changes in ascorbic acid content after *R. solani* inoculation and carbendazim treatment. Bhavanisagar, India, 1985.

Period (d) after inoculation and fungicide application	Treatment	Ascorbic acid content (mg/g of oven-dry tissue)					
		ADT31	CR1009	AU42/1	IR20	White Ponni	Mean
3	Healthy	0.812	0.983	0.881	0.904	0.872	0.890
	Inoculated	0.873	1.053	0.985	1.057	0.993	0.992
	Fungicide treated	0.942	1.167	1.098	1.113	1.054	1.075
5	Healthy	0.803	0.884	0.824	0.860	0.853	0.845
	Inoculated	0.856	0.907	0.859	0.874	0.872	0.874
	Fungicide treated	0.884	0.921	0.896	0.904	0.884	0.898
7	Healthy	0.762	0.838	0.801	0.788	0.797	0.797
	Inoculated	0.796	0.865	0.822	0.823	0.821	0.825
	Fungicide treated	0.837	0.884	0.864	0.873	0.854	0.862

Highly susceptible ADT31 contained less ascorbic acid than susceptible CR1009, AU42/1, IR20, and White Ponni (see table). Ascorbic acid content

increased with *R. solani* inoculation in all varieties and with fungicide application. It decreased with plant age. □

A new pathotype of *Xanthomonas campestris* pv. *oryzae*

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We tested in the glasshouse the virulence of 150 isolates of *X. c.* pv. *oryzae*, representing 25 endemic locations in India, using clip inoculation on a selected set of rice differential varieties.

The population first divided into two

distinct groups: pathotypes I and II. Pathotype I did not behave as a homogeneous population. But IR20, with the *Xa-4* gene, responded differentially on repeated tests to isolates of pathotype I.

Isolates from eastern Uttar Pradesh (U.P.), Maharashtra, and Punjab belonged to pathotype Ia, to which IR20 was resistant. Isolates from Andhra Pradesh, Bihar, Gujarat, Haryana, Kerala, Orissa, Tamil Nadu, and western U.P., belonged to pathotype Ib, to which IR20 was susceptible (see table). □

Serotypes in *Xanthomonas campestris* pv. *oryzae*

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Studies on serological relationships among pathotypes of *X. c.* pv. *oryzae* show they can also be differentiated by gel-diffusion and agglutination tests. In India, pathotypes I and II are classified on the basis of differential reactions on rice varieties DV85 and Cempo Selak. We tested antisera prepared in New Zealand white rabbits.

In the agglutination dilution series with their respective homologous antigens, the highest titers (5120 and 2560) were obtained in pathotype I and II. In the cross agglutination test, no titer value could be detected in any dilution series between the antiserum of

Pathogenicity patterns of *X. c.* pv. *oryzae* on differential rice varieties. Andhra Pradesh, India.

Group	Pathogenicity pattern on differential varieties					
	IR8	IR20	BJ1	DV85	Cempo Selak	Java 14
Pathotype Ia	S	R	R	R	S	S
Pathotype Ib	S	S	R	R	S	S
Pathotype II	S	S	S	S	R	R