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## NEW TOLERANCE SOURCES TO COMMON BACTERIAL BLIGHT OF BEANS IN BRAZIL

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Common bacterial blight of beans (*Phaseolus vulgaris*) incited by *Xanthomonas phaseoli* (E.F.Sm.) Dows. is a nationwide problem in Brazil. Up to the present, few bean cultivars are tolerant to this pathogen and the level of tolerance is low. Thus, it is imperative that new sources of tolerance be identified and incorporated to new cultivars.

An experiment has been conducted in the greenhouse at the National Center for Research on Rice and Bean, CNPAF, in Goiânia, state of Goiás.

A collection of 900 bean germplasm accessions were inoculated in a series of trials by clipping the primary leaves eleven days after planting with scissors dipped in a bacterial suspension. The culture of *X. phaseoli* (CNPAP Xp 15) was highly pathogenic among the isolates collected from central part of Brazil. The bacterial suspension ( $5 \times 10^7$  cells/ml) used as inoculum was determined by spectrophotometer and harvested from 48 to 72-hr-old PDA culture. Each trial consisted of 100 accessions plus four controls (L-32, susceptible; P.I. 207262, intermediate; and G.N. Jules and *P. acutifolius*, resistant). Disease severity ratings (0 = no symptom apparent - 6 maximum disease expression) were noted visually seven days after inoculation.

The mean disease ratings for the 45 bean accessions with disease rating equal to or less than intermediate control (Table 1) are being planted in a single trial at the same time to reconfirm these results. Feijão de 60 dias, 65 (B) 41 Retinto Santa Rosa and E 73 VUL 4887-1 had lower disease ratings as compared to the resistant control (G. N. Jules).

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TABLE 1. Mean Disease ratings for the best 45 bean cultivars inoculated with *X. phaseoli* in the greenhouse, Goiânia, Brazil - 1979-1980.

CULTIVARS	MEAN DISEASE RATINGS	CULTIVARS	MEAN DISEASE RATINGS
65(B)41 Retinto St. <sup>a</sup> Rosa	1.4	Mexico 29	2.6
E 73VUL 4887-1	1.6	Sacavem 705	2.7
Feijão de 60 dias	1.8	Honduras 36	2.7
S-67	1.9	N 595 St <sup>o</sup> Tomaz 8-N	2.7
Retinto Dulce	1.9	I-162	2.7
Wisconsin HBR-40	2.1	P.I. 215.717	2.7
N <sup>o</sup> 650	2.1	Venezuela 4-6	2.7
Mezcla roja S 16	2.2	C 168 N	2.7
Fullcrop x Record 2366	2.2	Guateian 6662	2.7
Mexico 240	2.4	L - 16	2.7
CE 33	2.4	Col 123 N	2.7
Ricopardo 896	2.4	P.I. 310 725	2.8
Diacol Nima	2.4	Mulatinho 218 V.P.	2.8
Colección 10-B	2.4	Guatemala 55	2.8
Sacavem 614	2.4	Colección 12-D	2.8
Desconhecido amarelo	2.5	Hibrido 20	2.8
Cherokee 1	2.5	Colombia	2.9
Jamapa (Ven.)	2.5	ICA Pijao	2.9
CE 11	2.5	BH 4935	2.9
Col. 73-6652	2.5	Esquisito	2.9
Honduras 24	2.5		
Jacalcapa pando Col 3-D	2.5	Control	
CD 23	2.5	L-32	4.4
Mexico 168	2.5	P.I. 207 262	2.9
N <sup>o</sup> 170	2.6	G.N. Jules	1.8
		<i>P. acutifolius</i>	0.7