The cultivars and breeding lines, Cape, Code 121, Custer, E 7201 W, Earligreen, Gina, GP 75023, 757005, 757008, 757009, 757012 and Spurt, moderately resistant or better in previous years at all locations, were not included in the 1978 uniform snap bean rust nursery.

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DEVELOPMENT OF RESISTANCE TO WISCONSIN'S BEAN ROOT ROT COMPLEX

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The bean (Phaseolus vulgaris L.) root rot disease in Wisconsin is caused by several fungi including Pythium spp., Fusarium solani f. sp. phaseoli and Rhizoctonia solani. No satisfactory control measure is available although certain plant introductions and bean lines have very helpful levels of resistance. In 1971, we made selections of resistant plants from several promising bean lines being tested in our root rot nursery at the Wisconsin Hancock Experimental Farm. Subsequently, we have crossed these resistant selections with one another and with selections from the cultivars Gloria and State Half Runner. Crosses to the susceptible cultivar 'Tenderwhite' were made to obtain proper maturity, good plant habit and processing-type pods. These researches resulted in the recent public release of the first bush beans with resistance to Wisconsin's bean root rot complex. These new beans have been designated Wisconsin (RRR) 77 and Wisconsin (RRR) 83. Tests in 1977 on infested soil showed that yields of processing beans were increased 400% by the use of these new beans in comparison with a standard susceptible cultivar. These studies also revealed that some of our newest breeding lines, evidently containing other resistance genes from additional sources, had higher levels of root rot resistance and increased processing bean yields 950%.

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PRELIMINARY INVESTIGATIONS OF PATHOGENIC VARIABILITY EXPRESSED BY Isariopsis griseola

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Angular leaf spot of dry edible beans is caused by the fungus, Isariopsis griseola, which is widespread and can cause serious yield losses in various regions of Latin America and other parts of the world. Investigations were recently initiated at CIAT to develop methodology required to evaluate resistance inherent in dry bean germ plasm and breeding progeny.

Abundant sporulation by the pathogen has been achieved by growing isolates in the laboratory on V-8 medium (200 ml V-8 juice, 3 g. CaCO₃, 18 g. CaSO₄, 120 ml water, 1.5 ml BHI, 0.1 ml Tween 80).