Development of High-Yielding Disease-Resistant Common Bean Germplasm Lines. (C01-smith163853-Poster)

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Abstract:

Single-plant selections in compacted and infested (Rhizoctonia solani and Fusarium solani) field plots were made among and within populations of common bean (Phaseolus vulgaris L.) based on general plant vigor. The following year, geometric means for seed yield of compacted/infested field plots and non-compacted field plots were used as the criteria for selecting the best rows. Selected plant rows were then assayed for resistance to Xanthomonas campestris pv phaseoli (Xcp), F. solani, R. solani, and a combination of F. solani, R. solani, and Pythium ultimum. High to moderate levels of resistance were noted among selected plant rows for specific pathogens. Some selected F6 lines produced high seed yield in replicated field trials and had resistance to Xcp similar to that of highly resistant 'VAX 6.' Others had resistance to F. solani similar to that of highly resistant 'NY 2114-12.'

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