

Progress Report on Screening Bean Species
and Varieties for Reaction to Bacterial Wilt

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1,065 plant introductions and numerous varieties obtained from diverse sources were screened for reaction to bacterial wilt (*Corynebacterium flaccumfaciens* var *aurantiacum*). This work was conducted at the University of Nebraska Agricultural Experiment Station. The stabbing method of inoculation described by the author in the 1962 BIC report was used in all bacterial wilt tests except in the case of species having the hypogeal type of germination. Excellent infection was obtained on check plants in all tests. Species and varieties which showed moderate to high tolerance to bacterial wilt are indicated in Table I. This screening study will be presented in detail in the Plant Disease Reporter at a later date.

Table I - Bean Species and Varieties Tolerant to Bacterial Wilt

VARIETY	PI#	SEED SOURCE	TOLERANCE	LOCATION OF TEST
Phaseolus coccineus	165421	Plant Intro.Sta., Pullman, Washington	High	Field and greenhouse
" "	181790	" "	Moderate	Field
Phaseolus vulgaris	136725	" "	"	Greenhouse
" "	136677	" "	"	"
" "	165078	" "	"	"
" "	204600	" "	Fair	Field
" "	226560	" "	"	"
Phaseolus mungo	174907	N.E. Reg.Plant Intro. Sta., Geneva, New York	Moderate to high	Greenhouse
" "	212615	Sou.Reg.Plant Intro. Sta., Georgia	"	"
Phaseolus aureus	222823	N.E. Reg.Plant Intro. Sta., Geneva, New York	High	"
" "	226657	Sou. Reg. Plant Intro. Sta., Georgia	"	"
" "	211066	" "	"	"
" "	200840	" "	Moderate	"

Phaseolus aconitifolius	213014	Sou.Reg.Plant Intro. Sta., Georgia	Moderate	Greenhouse
"	214332	"	"	"
Phaseolus bracteatus	158831	"	"	"
Phaseolus lathyroides	221897	"	Fair to Moderate	"
Phaseolus calcaratus	247686	"	High	"
Phaseolus acutifolius	-----	Unknown	"	"
Phaseolus polystachyus	-----	Dr. Lorz, A.P.,Vegetable Crops Dept., University of Florida,Gainsville,Fla.	Moderate	"

Effect of 2,4-D on the Yields of Great Northern

Dry Bean Variety Nebraska # 1

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Research workers at the University of California reported substantial increases in the yield of beans after the application of 2,4-D in combination with iron chelate to emerging bean plants. An experiment was conducted at the Scotts Bluff Experiment Station, Nebraska, in 1962 to determine the effect on yields of Great Northern dry bean Nebraska # 1 variety on the application of the following treatments:

1. 1 1/2 ppm 2,4-D + 300 ppm iron sequestrene 133;
2. 1/2 ppm 2,4-D + 300 ppm iron sequestrene 138.

The spray was applied when the primary leaves had expanded and before the first trifoliate leaves were developed. No significant difference in yield was observed between the control and any of the treatments.