Continued--

Variety or Breeding No.	Number Replications	Plant Habit1/	Plant Size2/	Growth Habit3/	Bacterial Blight4/	Comments
		Red Mexican types (Cont'd.)				
U. of I. #34	1	v	1	5.0	2.0	
Common R. M.	1	v	1	5.0	2.0	
		Miscellaneous				
Royal Red	4	b	1	1.0	2.5	
Large Red Kidney	1	b	1	1.0	4.0	
N. Y. H-13	1	b	1	1.0	3.0	
N. Y. H-14	1	b	1	2.0	2.0	Heavy pod set
N. Y. H-19	2	b	m to l	1.5	3.0	
Wisc. HBR-72	4	b	1	1.3	1.8	Very Late

1/ Plant Habit: b= bush, v = viney, sv = semi-viney.
2/ Plant size: s = small, m = medium, l = large.
3/ Growth Habit: 1 = erect and 5 = sprawling.
4/ Common bacterial blight: 1 = none and 5 = severe.

Nursery planted June 4 and notes taken August 26, 1970.
Plots = 25 single plant hills one foot apart.

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PROGRESS REPORT ON "LUNASTACHYUS" AMPHIDIPLOID DERIVATIVES FROM P. LUNATUS X P. POLYSTACHYUS

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1. Cytological determinations by Dr. J. E. Wyatt (1) have confirmed the amphidiploid character of the derivatives in the estimated F_{12} to F_{15} generation.

2. Genetic segregation for bush habit, white flowers and unpigmented seed coats (all P. lunatus - derived recessive characters) provide evidence for the "segmental" nature of the amphidiploids according to the terminology of Stebbins (2), where some intergenomic synapsis obviously must occur.

3. Hundreds of attempts to backcross "lunastachyus" amphidiploids to P. lunatus cultivars have consistently failed. The objective here has

ceen to establish a triploid with substantially two lunatus and one polystachyus genomes with the hope that such a plant might produce substantially P. lunatus 2n + 1 types with the extra chromosome derived primarily from the wild species.

Literature Cited

1. Wyatt, J. E. 1970. Cytological investigation of developmental progress toward diploidization in late generation amphidiploids from the cross Phaseolus lunatus L. x P. polystachyus (L) B.S.P. U. of Fla. Ph.D. Dissertation (pp. 128).

2. Stebbins, G. L., Jr. 1947. Types of polyploids: Their classification and significance. Adv. Genet 1: 403-429.

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CONTROL OF FUSARIUM ROOT ROT OF BEANS BY IN-FURROW FUNGICIDE SPRAYS

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California Red Kidney beans were planted on July 17 in a field infested with Fusarium solani f. phaseoli. Fungicide sprays were applied at time of planting with a tractor-mounted sprayer equipped with nozzles positioned on the planter so as to direct the spray into the open furrow as the seed was dropped and immediately before the furrow was covered. One gallon of spray was applied to 1000 ft. of row. Treatments were applied to 6-row plots, 30 ft. long, and were replicated four times. All seeds were untreated with the exception of one plot in which seeds treated with Delsan A-D were planted.

The fungicide applied as in-furrow sprays were Benlate 50W at 1 oz. active per 1000 ft. of row, Demosan 65 at 2 oz. active, Benlate 50W at 1 oz. active plus Demosan 65 at 2 oz. active, Benlate 50W at 0.5 oz. active plus Demosan 65 at 1.0 oz. active, and Mertect 0111-W at 1 oz. and 2 oz. active. Unsprayed plots in which seeds treated with Delsan A-D were planted and unsprayed plots in which untreated seeds were planted served as controls.

On July 22 and September 9, the roots of 50 plants pulled from the two outside rows of each plot were rated for severity of root rot according to the following scale: 1 = no symptoms, 2 = slight, 3 = moderate, and 4 to 10 = rates of increasing severity to death of plant. Most of the severe infections were in the 4 and 5 categories.

Yield data were obtained from the four inner rows of each plot. The pods were harvested on October 11, shelled during the next few weeks and then air-dried in the greenhouse. The dried beans were weighed on November 11.