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Supplementary Material

Sensitivity of leaflet growth rate to drought predicts yield in common bean (*Phaseolus vulgaris*)

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Table S1. Genotypes are ordered by relatedness, starting with the two Recombinant Inbred Lines (RILs)

The two parents are listed first followed by their six offspring, ordered by drought tolerance. Below the two RILS are the three other genotype of *Phaseolus vulgaris*. The last is *Phaseolus acutifolius*, tepary bean, referred here as G40001. Growth type: 2A = indeterminate bush habit, erect stems without guide; 2B = indeterminate bush habit, erect stems with guide, tendency to climb; 3B = indeterminate bush habit with weak mainstem and with prostrate branches, short guide, not tendency to climb. Seed color: 1 = white; 2 = cream-beige; 3 = yellow; 4 = brown-maroon; 5 = pink; 6 = red; 7 = purple; 8 = black. Seed size, based on the weight of 100 seeds: 1 = small, < 25 g; 2 = middle, 25-40 g; 3 = big, > 40 g; Shown PHI values were obtained in 2016 at CIAT

Line/code	Genotype	Country of origin	Growth type	Seed color/size	PHI (WW; drought)	Stress response
MD2324	MD 23-23	Honduras	Bush bean, 2A	6/1	80; 74	Heat tolerant, moderate resistance to BGYMV
SEA5	SEA 5	Colombia (CIAT)	Bush bean, 2A	2/2	78; 74	Drought tolerant
MR81	MD 23-24 x SEA 5/-(NN)C-(NN)C-81C-1C-MQ-MC	Colombia (CIAT)	Bush bean, 2A	6/2	81; 76	Drought tolerant

MR25	MD 23-24 x SEA 5/-(NN)C-(NN)C-25C-1C-MQ-MC	Colombia (CIAT)	Bush bean, 2B	2;5/2	79; 73	Drought tolerant
MR112	MD 23-24 x SEA 5/-(NN)C-(NN)C-112C-1C-MQ-MC	Colombia (CIAT)	Bush bean, 2B	6/2	78; 70	Drought tolerant
MR116	MD 23-24 x SEA 5/-(NN)C-(NN)C-116C-1C-MQ-MC	Colombia (CIAT)	Bush bean, 2A	6/1	81; 75	Drought susceptible
MR109	MD 23-24 x SEA 5/-(NN)C-(NN)C-109C-1C-MQ-MC	Colombia (CIAT)	Bush bean, 2A	4/2	77; 70	Drought susceptible

MR8	MD 23-24 x SEA 5/-(NN)C-(NN)C-8C-1C-MQ-MC	Colombia (CIAT)	Bush bean, 2A	2;6;8/2	73; 71	Drought susceptible
BAT881	BAT 881	Colombia (CIAT)	Bush bean, 2A	4/1	78; 62	Elite line, drought susceptible, low P sensitive
G21212	G 21212	Colombia	Bush bean, 3B	8/2	81; 72	Excellent grain filling, drought susceptible
BH9	BAT 881 x G 21212/-1-1-M-M-M-M-M-M-M-M-M	Colombia (CIAT)	Bush bean, 2A	4/1	82, 70	Drought tolerant
BH152	BAT 881 x G 21212/-1-1-M-M-M-M-M-M-M-M-M	Colombia (CIAT)	Bush bean, 2B	4/1	78; 69	Drought tolerant

BH45	BAT 881 x G 21212/-1-1-M-M-M-M-M-M-M-M-M	Colombia (CIAT)	Bush bean, 2B	8/1	78; 65	Drought tolerant
BH2	BAT 881 x G 21212/-1-1-M-M-M-M-M-M-M-M-M	Colombia (CIAT)	Bush bean, 2A	8/1	77; 66	Drought tolerant
BH36	BAT 881 x G 21212/-1-1-M-M-M-M-M-M-M-M-M	Colombia (CIAT)	Bush bean, 2A	4/1	80; 72	Drought susceptible
BH50	BAT 881 x G 21212/-1-1-M-M-M-M-M-M-M-M-M	Colombia (CIAT)	Bush bean, 2B	8/1	80; 70	Drought susceptible

SEN56	SEN 56	Colombia (CIAT)	Bush bean, 2A	8/2	81; 69	Drought tolerant
DOR390	DOR 390	Colombia (CIAT)	Bush bean, 2B	8/1	79; 69	Drought susceptible
INB841	INB 841	Colombia (CIAT)	Bush bean, 2A	4/1	77; 71	Drought tolerant
G40001	G 40001	Mexico	Climbing bean, 3B	1/1	80; 75	Drought tolerant

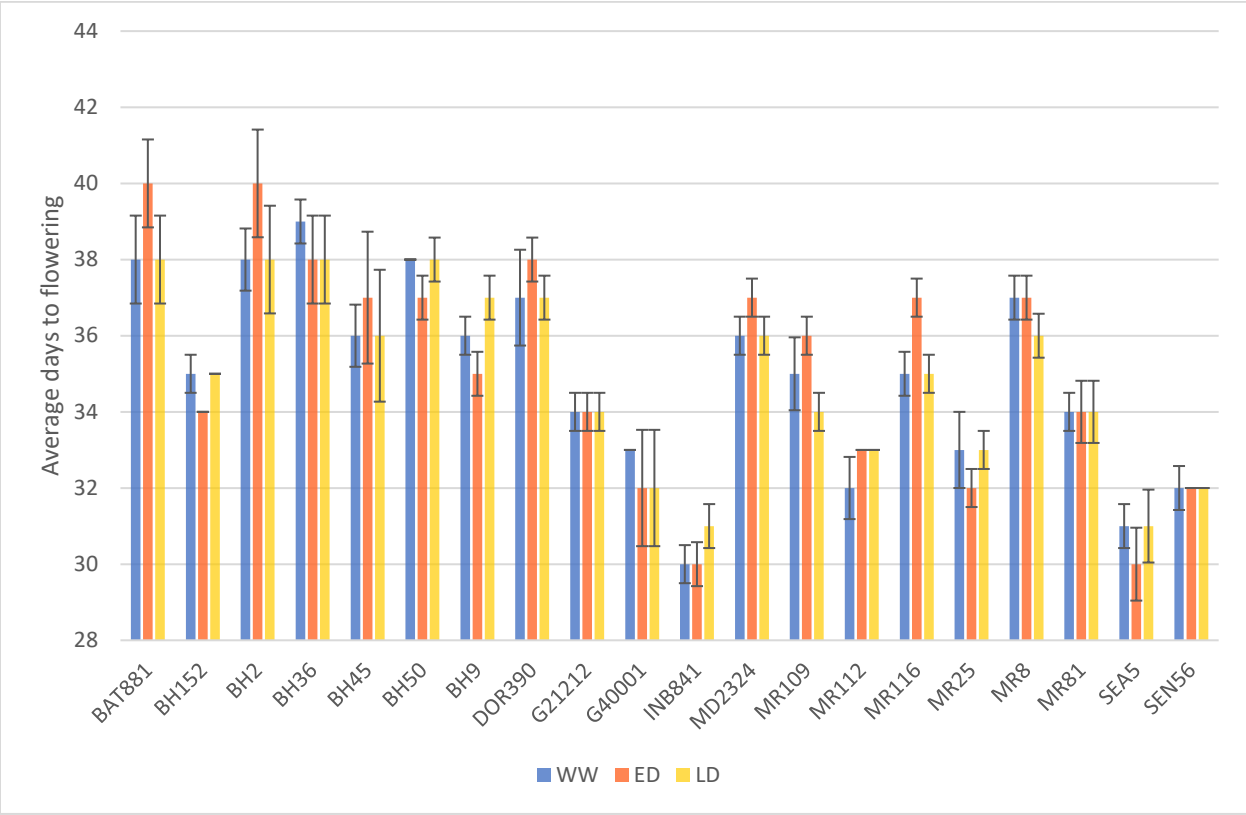

Fig. S1. Averages number of days to flowering for all genotypes together are as follows: WW 34.8 ± 0.28; early drought (ED) 35.1 ± 0.36; late drought (LD) 34.8 ± 0.28; no significant differences between treatments were observed.

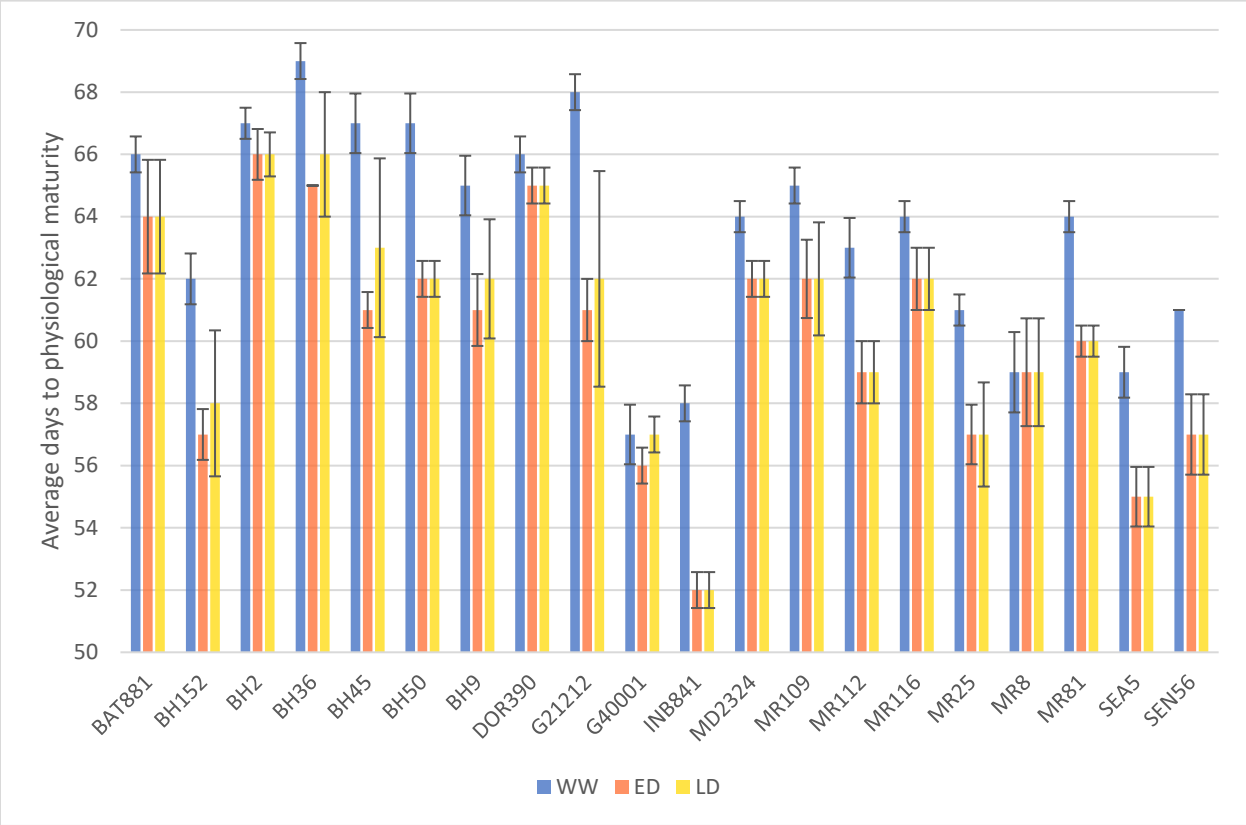

Fig. S2. Average number of days to physiological maturity for all genotypes are as follows: WW 63.8 ± 0.38; early drought (ED) 60.1 ± 0.42; late drought (LD) 60.5 ± 0.42. Significant differences between ED:WW (p value 3.94E-08) and LD:WW (p value 1.94E-06).