

## Supplementary Tables

**Table S1:** Combined analysis of variance for seed yield and days to maturity in 45 tepary bean genotypes evaluated across two seasons and four environments

Source of variation	Df	Mean square	
		SY	DTM
Replication (Season x Environment)	9	80368	0.0001
Genotype	44	504816	135.8114
Season	1	12605156	205.4083
Environment	3	11496587	3010.5194
Genotype x Season	44	198018	6.0788
Genotype x Environment	132	68621	27.9058
Season x Environment	3	753706	59.4306
Genotype x Environment x Season	132	65151	4.0328
Residual	718	16956	0.6263
Total	1079	102200	18.4192

df: degrees of freedom, SY: seed yield, DTM: days to 90% physiological maturity

**Table S2:** Days to maturity for 45 tepary bean genotypes evaluated across  
two seasons and four environments

Genotype	E1	E2	Genotype	E1	E2	Genotype	E1	E2
G1	80	78	G23	81	79	G37	76	73
G10	89	79	G24	85	80	G38	81	78
G11	86	82	G25	82.5	79	G39	86	76
G12	89	78	G26	82	80	G4	83	78
G13	79	74	G27	88	80	G40	85	78
G14	83	78	G28	84	79	G41	78	75
G15	84	79	G29	89	80	G42	82	78
G16	82	79	G3	89	78	G43	86	79
G17	76	74	G30	84	79	G44	81	79
G18	87	79	G31	86	80	G45	81	78
G19	83	78	G32	84	80.5	G5	79	76
G2	86	79	G33	85	79	G6	89	80
G20	82	80	G34	83	80	G7	84	80
G21	83	80	G35	82	79	G8	83	76
G22	83	79	G36	87	84	G9	84	80
Environment	MEAN	SEASON	E 1	E2	Grand mean	CV%		
E1	84	1	84	79	79.98	1.44		
E2	79	2	84	79				

CV% = Coefficient of variation

Table S2: Continued

Genotype	E3	E4	Genotype	E3	E4	Genotype	E3	E4
G1	78.5	73	G23	79	74	G37	76.5	73
G10	81	74	G24	84	76	G38	81	78
G11	79	70	G25	81	78	G39	84	81
G12	86	79	G26	79	75	G4	82.5	74
G13	76	76	G27	87	83	G40	83	81.5
G14	80	75	G28	83	77.5	G41	73	70
G15	81	71	G29	86.5	74.5	G42	77	74
G16	79	76	G3	87	81	G43	81	78
G17	73	73	G30	82	79.5	G44	78	78
G18	84	72	G31	83.5	79	G45	78	72
G19	80	78	G32	82	80	G5	77.5	70
G2	85	74.5	G33	81	76	G6	87	73
G20	79	75	G34	81.5	80	G7	81	75
G21	80	72	G35	81	76.5	G8	83	77
G22	83	74	G36	84.5	75.5	G9	81	79
Environment	MEAN	SEASON	E 3	E4	Grand mean	CV%		
E3	81	1	80	75	79.98	1.44		
E4	76	2	82	77				

**Table S3:** Selection differential for mean performance and weighted average of the stability and mean performance (WAASBY) scores for seed yield and days to maturity in 45 tepary bean genotypes evaluated across two seasons and four environments.

Mean performance					WAASBY			
Trait	XO	XS	SD	%SD	XO	XS	SD	%SD
Seed yield	498.33	474.5	-23.8	-4.78	2.2	0.63	-1.58	-71.6
Days to maturity	79.8	79.45	-0.33	-0.41	0.47	0.21	-0.25	-54.2

Xo = population mean, Xs = mean of selected genotypes, SD = selection differential.

**Table S4:** Multi trait stability index (MTSI) values for 45 tepary bean genotypes evaluated across two seasons and four environments

Genotype	MTSI	Genotype	MTSI	Genotype	MTSI
G1	2.48	G16	2.46	G31	1.59
G2	1.72	G17	3.38	G32	2.39
G3	3.06	G18	4.39	G33	0.32
G4	1.25	G19	2.82	G34	2.48
G5	1.7	G20	1.07	G35	2.03
G6	2.99	G21	3.29	G36	2.99
G7	2.79	G22	0.93	G37	1.45
G8	2.97	G23	0.79	G38	1.41
G9	2.09	G24	1.52	G39	3.57
G10	2.69	G25	0.83	G40	2.57
G11	3.67	G26	2.82	G41	1.64
G12	2.66	G27	3.57	G42	0.99
G13	2.02	G28	1.28	G43	0.43
G14	0.34	G29	3.73	G44	1.79
G15	2.77	G30	1.88	G45	1.7