

Table 2 Morphological traits used for the description of the field bean lines and controls

Trait	Abbreviation	Scale
Stipule spot	SSP	1 'abscent' ; 9 'precence'
Lodging	LOD	3 'weak';5 'medium';7 'strong'
Leaflet width	LEW	3 'narrow';5 'medium';7 'broad'
Leaflet: position of maximum width	LPW	1 'towards tip' ;2'at middle';3 'towards base'
Stem Anthocyanine pigmentation	SAP	3 'weak';5 'medium';7 'strong'
Growth type of plants (habit)	GWH	
Colour of melanin spot of Wing	CMS	1 'abscent' ; 9 'precence'
Melanin spot of standard (streaks)	MSS	0'absence ' .3'slight';5 'moderate';7 'intense'
Anthocyanin coloration of standard	ACS	1 'abscent' ; 9 'precence'
Total Number of nodes	TNN	-----
Branching	BRG	-----
100-Seed weight	100-SW	G
Total Number of pods per plant	TNP	-----
Time of flowering (50% of the plants with at least one flower opened)	NDF	Days
Number of days for first pod setting	NDP	Days
Number of days to maturity	NDM	Days
Leaf Area: one leaf in the 5th flowering node	LAR	(cm ² /leaf)
Pod angles	PAG	°
Standard lenght	STL	(cm)
Nbre of lefleets /fifth flowring node leaf	Nrefol	-----
Number of pods with 4 seed (NP4S)	NP4S	-----
Number of pods with 3 seed (NP3S)	NP3S	-----
Number of pods with 2 seed (NP2S)	NP2S	-----
Number of pods with 1 seed (NP1S)	NP1S	-----
Seedyield per plant	SYP	seed/plant
Hilumcolour	HLC	1 'abscent' ; 9 'precence'
Pod Shape	PSH	
final plant height (cm)	FHP	(cm)
Branching from the main stem	Brg	-----
Main stem width	DTM	(cm)
Total Seed yield per plant	TSP	

Note: MS: mean square; CV: coefficient of variation; SD: standard deviation; R²: coefficient of determination; ns: not significant; *: significant at p <0.05; ** highly significant p <0.01; ***: very highly significant p <0.001; na: not applicable; FPH: final plant height (cm); TNN: total Number of nodes; LA: leaf area: one leaf in the 5th flowering node; MSW: Main stem width; StL: Standard length; Br: branching; FT: flowering time of flowering (50% of the plants with at least one opened flower); NDM: number of days to maturity; TNP: total number of pods per plant; PA: pod angles; NL: number of leaflets; NP4S: number of pods with 4 seeds; NP3S: number of pods with 3 seeds; NP2S: number of pods with 2 seeds; NP1S: number of pods with 1 seed; TSP: total seeds per plant; HLC: hilum color; PSh: pod shape; SW: 100-seed weight