

Plant		Kidney bean		472	Primary essential character
No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Hypocotyl color	Block	Observation	2:Green 5:Light reddish purple 7:Reddish purple 8:Purple	Hypocotyl color at the first leafing stage (Coloration of young stem in case of scarlet runner bean)
2	Vine type	Block	Observation	1:Determinate dwarf 4:Determinate bush 6:Indeterminate semipole 9:Pole	Presence of flower stalk at the top of main stem
3	Flower color	Block	Observation	1:White 2:Yellowish white 3:Light reddish purple 5:Red 7:Reddish purple 9:Mix	Flower color at the day of anthesis, mix:in case of different color of the standard from the wing
4	Pod length	30 pods	Obs.&Measr.	1:Extremely short 2:Very short 3:Short 4:Slightly short 5:Intermediate 6:Slightly long 7:Long 8:Very long 9:Extremely long	Length from the basal to pod apex, in case for vegetable at edible maturity and for grain at maturity
5	100 grains weight	100 grains, 2 replications	Measurement	g (round to the 1st decimal place)	Dried grains in which moisture content is below 16%
6	Grain shape	Block	Observation	1:Spherical 3:Oval-contracted 5:Oval 7:Oval-elongated 8:Kidney shape 9:Egg shape	
7	Speckle of seedcoat	Block	Observation	0:Absent 2:Normal speckle 4:Irregular speckle	
8	Base color of seedcoat	Block	Observation	1:White 2:Yellowish white 3:Yellow 4:Light brown 5:Brown 6:Red 7:Reddish purple 8:Blackish brown 9:Black	Base color of the speckle variety is lighter than other.
9	Speckle color of seedcoat	Block	Observation	1:Yellow 2:Yellowish brown 3:Brown 4:Light brown 5:Red 6:Reddish purple 7:Dark reddish purple 8:Black 9:Mix	Speckle variety
10	Ring color of seedcoat	Block	Observation	0:None 1:White 3:Yellow 4:Yellowish brown 5:Brown 6:Reddish brown 7:Red 8:Dark reddish purple 9:Black	Ring color of circumferential pattern around embryo which distinguished from irregular speckle
11	Flowering time	Block	Observation	date	Date when 40-50% of plants have flowered

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12	Maturing time	Block	Observation	date	Date when pods discolored in more than 80% total plants and most of grains appeared peculiar color to each variety.

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1	Plant height	10 plants	Measurement	cm (integer)		Length from ground to top of the uppermost node in determinate type. In indeterminate type, length at the ground to growing point of stem
2	Number of nodes	10 plants	Measurement	* (round to the 1st decimal place)		Number of nodes from the cotyledonary to the uppermost node of main stem
3	Leaf color	Block	Observation	3:Light green 4:Slightly light green 5:Green 6:Slightly dark green 7:Dark green		Color of complete leaf just before anthesis
4	Leaflet size	Block	Observation	1:Extremely small 2:Very small 3:Small 4:Slightly small 5:Intermediate 6:Slightly large 7:Large 8:Very large 9:Extremely large		Size of the central leaflet of complete leaf in the middle of main stem at flowering time
5	Flower position	Block	Observation	3:Inner 5:Intermediate 7:Outer		Inner:inflorescences bear inside of the foliage, outer:inflorescences bear outside of the foliage
6	Pod width	30pods	Obs.&Measr.	3:Narrow 4:Slightly narrow 5:Intermediate 6:Slightly broad 7:Broad		Width at the widest part of pod
7	Degree of curvature in pod	Block	Observation	3:Straight 5:Slightly curved 7:Strongly curved		Degree of curvature at the full harvesting stage
8	Beak length of pod	Block	Observation	3:Short 4:Slightly short 5:Intermediate 6:Slightly long 7:Long		Pod length at the full harvesting stage
9	Beak shape of pod	Block	Observation	3:Straight 5:Slightly curved 7:Strongly curved		Beak shape of pod at the full harvesting stage
10	Degree of constriction in pod	Block	Observation	0:Absent 9:Present		Presence of constriction of pod at the full harvesting stage
11	Pod surface	Block	Observation	3:Smooth 4:Slightly smooth 5:Intermediate 6:Slightly rough 7:Rough		Degree of smoothness of pod surface
12	Cross section of pod	Block	Observation	1:Flat 2:Flat-Ellipse 3:Ellipse 4:Slightly ellipse 5:Round 6:Round heart shaped 7:Heart-shaped		Cross section of the middle of pod at the full harvesting stage

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13	Immature pod color	Block	Observation	1:Light yellow 2:Yellow 3:Light green 4:Green 5:Dark green 6:Reddish purple 7:Purple 9:Other	Pod color at grain developing stage
14	Speckle color of immature pod	Block	Observation	0:Absent 2:Red 3:Reddish purple 4:Purple 9:Other	Speckle color at grain developing stage
15	Number of grains per pod	30 pods	Obs.&Measr.	1:Extremely few 2:Very few 3:Few 4:Slightly few 5:Intermediate 6:Some 7:Many 8:Very many 9:Extremely many	Number of grains which confirmed as a grain by touching

Plant	Kidney bean		472	Secondary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Degree of lodging	Block	Observation	0:None 1:Extremely little 2:Very little 3:Little 4:Slightly little 5:Intermediate 6:Some 7:Much 8:Very much 9:Extremely much	Degree of lodging at maturing stage

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No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Harvesting time	Block	Observation	1:Extremely early 2:Very early 3:Early 4:Slightly early 5:Intermediate 6:Slightly late 7:Late 8:Very late 9:Extremely late		Date when pods were harvested in case of vegetable use
2	Heat tolerance	Block	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		Degree of pod setting at higher temperatures in summer
3	Anthraco nose resistance	Block	Observation	0:None 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		High=50%, intermediate=30%, Low=10%.
4	Stem rot resistance	Block	Observation	0:None 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		High=50%, intermediate=30%, Low=10%.
5	Angular leaf spot resistance	Block	Observation	0:None 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		High=50%, intermediate=30%, Low=10%.

Plant	Kidney bean		472	Tertiary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Use	Block	Observation	1:Grain 5:Intermediate 9:Vegetable	
2	Grain yield	Block	Measurement	kg/a (round to the 1st decimal place)	Weight of grains after shattering and winnowing

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1	Hardness of pod	Block	Observation	3:Tender 4:Slightly tender 5:Intermediate 6:Slightly hard 7:Hard	Length of edible period for pod
2	Pod string	Block	Observation	0:Absent 9:Present	Presence of pod string at harvesting time