Table 7. List of descriptors for Sorghum

Descriptor number	Descriptor	Descriptor state	Recording stage	Remarks	Previous descriptor state*
1	Accession number				
2	Race and Group name	1 Bicolor			
		10 Bicolor			
		11 Dochna			
		12 Nervosum			
		13 Nervosum-kaoliang			
		14 Nervosum-broomcorn			
		15 Sudanense			
		2 Guinea			
		20 Guineense			
		21 Conspicuum			
		22 Margaritiferum			
		23 Roxburghii			
		3 Caudatum			
		30 Caudatum			
		31 Caudatum-nigricans			
		32 Nigricans			
		33 Sumac			
		34 Nigricans-feterita			
		35 Dobbs			
		36 Caudatum-kaura			
		37 Zerazera			
		4 Kafir			
		40 Caffrorum			
		5 Durra			
		50 Durra			
		51 Nandyal			
		52 Cernuum			
		6 Guinea-bicolor			
		60 Guinea-bicolor			
		61 Dochna-honey			
		62 Dochna-roxburghii			
		7 Caudatum-bicolor			
		70 Caudatum-bicolor			
		71 Caudatum-dochna			
		72 Nigricans-bicolor			
		73 Dochna-nigricans			
		8 Kafir-bicolor			
		80 Bicolor-kafir			
		81 Caffrorum-bicolor			
		82 Dochna-kafir			
		9 Durra-bicolor			
		90 Durra-bicolor			
		91 Dochna-durra			
		92 Durra-dochna			
		93 Subglabrescens			
		94 Subglabrescens-milo			
		95 Milo-kaura			
		10 Guine,a-caudatum			
		100 Caudatum-guineense			
		101 Nigricans-guineense			
		11 Guinea-kafir			
		110 Caffrorum-roxburghii			
		111 Roxburghii-shallu			
		12 Guinea-durra			

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Descriptor number	Descriptor	Descriptor state	Recording stage	Remarks	Previous descriptor state*
		120 Durra-roxburghii			
		121 Membraneceum			
		122 Durra-membranaceum			
		13 Kafir-caudatum			
		130 Caudatum-kafir			
		131 Caffrorum-birdproof			
		132 Caffrorum-darso			
		133 Caffrorum-feterita			
		14 Durra-caudatum			
		140 Cauclatum-durra			
		141 Nigricans-durra			
		142 Durra-nigricans			
		143 Durra-feterita/Kaura			
		15 Kafir-durra			
		150 Durra-kafir			
		151 Caffrorum-durra			
		16 Perennial wild			
		160 S. halepense			
		161 S. propinquum			
		17 Annual wild			
		170 S. bicolor subsp. drummondii			
		18 S. bicolor subsp. verticilliforum			
		180 verticilliforum			
		181 arundinaceum			
		182 virgatum			
		183 aethiopicum			
		19 Unclassified			
		20 Breeding material 200 Unclassified			
		21 Mixed			
3	Seedling vigour	3 Low	15 days after emergence		
		5 Intermediate			
		5 High			
4	Lodging susceptibility	3 Low			
		5 Intermediate			
		5 High			
5	Senescence rating	1 Very slightly senescent (10%)	Death of leaves and stalk at grain maturity		
		3 Slightly senescent (25%)			
		5 Intermediate (about half of leaves dead, 50%)			
		7 Mostly senescent (75%)			
		9 Completely senescent (leaves and stalk dead)			
6	Photosensitivity	1 Insensitive			
		2 Partially sensitive			
		3 Very sensitive			
7	Plant stand	The total numbre of plants recorded soon after thinning	20-25 days after planting		
8	Plant height	Height from ground up to the top of panicke at flowering	At flowering	**Added recording stage**	
9	Plant colour (refer RHS colour codes)	1 Pigmented (grey-brown group 199A; brown group 200D, 200C, 200B, 200A)	At harvest		
		2 Tan (greyed-yellow group 161B)			

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Descriptor number	Descriptor	Descriptor state	Recording stage	Remarks	Previous descriptor state*
10	Stalk juiciness	0 Not juicy	At maturity	**Added recording stage**	
		+ Present			
11	Juice flavour	1 Sweet	At maturity	**Added recording stage**	
		2 Insipid			
12	Leaf midrib colour (see RHS colour codes)	1 White (white group 155B)	At flowering	**Added recording stage**	
		2 Dull green (greyed-green group 191C)			
		3 Yellow (yellow group 7A, 7B)			
		4 Brown (greyed-orange group 165C)			
		5 Purple (greyed-purple group 183D, 183C, 183B, 183A)			
		6 Others (specify)			
13	Waxy bloom	3 Slightly present	At flowering stage	**Added recording stage**	
		5 Medium			
		7 Mostly bloomy			
		9 Completely bloomy			
14	Days to flowering	From date of sowing to the date when 50% plants started flowering			
15	Inflorescence compactness and shape (see fig.)	1 Very lax panicle, typical of wild sorghum		**Modified previous descriptor state***	1 Very lax panicle, typical of wild sorghum
		2 Very loose erect primary branches			2 Very loose erect primary branches
		3 Very loose drooping primary branches			3 Very loose drooping primary branches
		4 Loose erect primary branches			4 Loose erect primary branches
		5 Loose drooping primary branches			5 Loose drooping primary branches
		6 Semi-loose erect primary branches			6 Semi-loose erect primary branches
		7 Semi-loose drooping primary branches			7 Semi-loose drooping primary branches
		8 Semi-compact elliptic			8 Semi-compact elliptic
		9 Semi-compact oval			9 Compact elliptic
		10 Compact elliptic			10 Compact oval
		11 Compact oval			11 Half broom corn
		12 Half broom corn			12 Broom corn
		13 Broom corn			13 Other (specify)
		14 Other (specify)			
16	Glume color	1 Black	Soft dough stage	**Modified previous recording stage and previous descriptor state***	**Previous recording stage:** At maturity
		2 Brown			**Previous descriptor state** 1 Black
		3 Grey			2 Brown
		4 Light brown			3 Grey
		5 Light red			4 Light brown
		6 Partly straw and brown			5 Light red
		7 Partly straw and purple			6 Partly straw and brown
		8 Purple			7 Partly straw and purple

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Descriptor number	Descriptor	Descriptor state	Recording stage	Remarks	Previous descriptor state*
		9 Red			8 Purple
		10 Reddish brown			9 Red
		11 Straw			10 Reddish brown
		12 White			11 Straw
		13 Yellow			12 White
		14 Other			13 Yellow
17	Grain covering (see fig.)	1 Uncovered	At maturity	**Modified previous descriptor state***	1 25% grain covered
		2 25% covered			3 50% grain covered
		3 50% grain covered			5 75% grain covered
		4 75% grain covered			7 Grains fully covered
		5 Grains fully covered			9 Glumes longer than grain
18	Awns	0 Absent	At maturity		
		+ Present			
19	Shattering	1 Very low	At maturity	**Added recording stage**	
		3 Low			
		5 Intermediate			
		7 High			
		7 Very high			
20	Plant appearance score	1 Very good i.e. most desirable combination of traits (stalk, leaf, panicle and grain	Five days after physiological maturity	**New descriptor**	
		2 Good			
		3 Average			
		4 Below average			
		5 Poor i.e. most undesirable combination of traits (stalk, leaf, panicle			
21	Seed colour (refer RHS colour codes)	1 White	In laboratory	**Modified previous descriptor state***	1 White (white group 155D, !55C, !55B, !55A)
		2 Straw			2 Yellow (yellow group 6D, 6C, 6B, 6A)
		3 Chalky white			3 Red (orange-red group 33C, 33B, 33A, 165B, 165A)
		4 Grey			4 Brown (greyed-orange group 164B, 164A, 165B, 165A)
		5 Red			5 Buff (greyed-orange group 166B)
		6 Light red			6 others (specify)
		7 Yellow			
		8 Light brown			
		9 Brown			
		10 Black			
		11 Purple			
		12 Variegated			
		13 Reddish brown			
		14 Mixed			
22	Genotypic pericarp colour	1 White			
		2 Lemon yellow			
		3 Red			
23	Pigmented tesa	0 Absent			
		1 Present			

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Descriptor number	Descriptor	Descriptor state	Recording stage	Remarks	Previous descriptor state*
24	Grain lustre	0 Non lustrous	In laboratory	**Modified previous descriptor state***	0 Absent (not lustrous)
		1 Lustrous			+ Present
25	100-seed weight (g)	Sun dried seeds (12% moisture content)	In laboratory		
26	Grain yield plant[1] (g)	Average weight of seeds collected from ten representative plants	Post harvest		
27	Grain yield plot^{-1} (kgha^{-1})	Total seed weight of all the plants in the plot and calculating yield in kg per hectare	Post harvest		
28	Desirability rating	1 Very good			
		2 Good			
		3 Average			
		4 Poor			
		5 Very poor			
29	Grain number per panicle	Total grains per panicle	In laboratory		
30	Grain sub-coat	0 Absent			
		+ Present			
31	Grain plumpness (see fig)	3 Dimple	In laboratory		
		7 Plump			
32	Grain form (see fig.)	1 Single	At maturity		
		2 Twin			
33	Endosperm texture (see fig.)	1 Completely corneous	In laboratory		
		3 Mostly corneous			
		5 Intermediate			
		7 Mostly starchy			
		9 Completely starchy			
34	Endosperm colour (see RHS colour codes)	1 White (white group 155B)	In laboratory		
		2 Yellow (greyed-yellow group 162 A)			
35	Endosperm type	1 Normal			
		2 Waxy			
		3 Sugary			
36	No. of heads per plant		At maturity		
37	Inflorescence exsertion	1 Slightly exserted (<2 cm)			
		2 Exserted (2-10 cm)			
		3 Well exserted (>10 cm)			
		4 Peduncle recurved			
38	Inflorescence length (cm)	Length in cm from base of inflorescence to tip	At maturity		
39	Inflorescence width (cm)	Measured at widest part	At maturity		
40	Threshability	Scored on 1-5 scale, where	At maturity	**Modified previous descriptor state***	Scored on 1-9 scale, where
		1 Difficult to thresh			1 Very difficult
		3 Partly threshable			3 Difficult
		5 Freely threshable			5 Intermediate
					7 Good
					9 Excellent
41	Grain weathering susceptibility	3 Low (good resistance)			
		5 Medium			
		7 High (poor resistance)			
42	Grain protein(%)	3 Low (<10%)			
		7 High (≥ 10%)			
43	Tannin in grain	1 Testa brown (greyed -orange)			
		2 Testa and pericarp brown			
44	Restoration response	1 Maintainer			
		2 partial maintainer/restorer			

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Descriptor number	Descriptor	Descriptor state	Recording stage	Remarks	Previous descriptor state*
		3 Restorer			
45	Male sterile cytoplasm system	1 A_1			
		2 A_2			
		3 A_3			
		4 A_4			
Abiotic stresses					
46	Low temperature	Score on 1-9 scale, where		**Modified previous descriptor state***	Susceptibility scored on 1-9 scale, where
		1 Highly tolerant			1 Very low susceptibility
		3 Tolerant			3 Low
		5 Moderately tolerant			5 Intermediate
		7 Susceptible			7 High
		9 Extremely susceptible			9 Very high
47	Heat	Susceptibility scored as for 'Low temperature'			
48	Drought	Susceptibility scored as for 'Low temperature'			
49	Soil salinity	Susceptibility scored as for 'Low temperature'			
50	Soil acidity	Susceptibility scored as for 'Low temperature'			
Biotic stresses					
Insect-pests					
51	Sorghum shoot fly (*Atherigona soccata*)	Score on 1-9 scale, where		**Modified previous descriptor state***	Susceptibility scored on 1-9 scale, where
		1 Highly resistant			1 Very low susceptibility
		3 Resistant			3 Low
		5 Moderately resistant			5 Intermediate
		7 Susceptible			7 High
		9 Highly susceptible			9 Very high
52	Spotted stem borer (*Chilo partellus*)	Susceptibility scored as for 'Sorghum shoot fly'			
53	Sorghum midge (*Stenodiplosis sorghicola*)	Susceptibility scored as for 'Sorghum shoot fly'			
54	Earhead bug (*Calocoris angustatus; Eurystylus immaculatus*)	Susceptibility scored as for 'Sorghum shoot fly'			
55	Sugarcane aphid (*Melanaphis sacchari*)	Susceptibility scored as for 'Sorghum shoot fly'			
Diseases					
56	Anthracnose (*Colletotrichum graminicola*)	Susceptibility scored as for 'Sorghum shoot fly'			
57	Grain moulds (*Curvularia lunata; Fusarium* sp.)	Susceptibility scored as for 'Sorghum shoot fly'			
58	Leaf blight (*Exserohilum turcicum; Setosphaeria turcica; Helminthosporium turcicum*)	Susceptibility scored as for 'Sorghum shoot fly'			
59	Downy mildew (*Peronosclerospora sorghi*)	Susceptibility scored as for 'Sorghum shoot fly'			
60	Rust (*Puccinia purpurea*)	Susceptibility scored as for 'Sorghum shoot fly'			
61	Ergot (*Sphacelia sorghi*)	Susceptibility scored as for 'Sorghum shoot fly'			

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Descriptor number	Descriptor	Descriptor state	Recording stage	Remarks	Previous descriptor state*
62	Parasite-*Striga* sp.	Susceptibility scored as for 'Sorghum shoot fly'			

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