

Table 9 Mean square values, component of variances and broad sense heritability for various quantitative traits in cowpea under water-stressed (WS) and well-watered (WW) conditions

	PH6 (cm)		TLA (cm ²)		NL		NDF		NDR		PV	
	WW	WS	WW	WS	WW	WS	WW	WS	WW	WS	WW	WS
MS	29.96	27.04	339.1	292.7	752.70	20.54	61.34	100.17	125.9	134.2	0.01	3.64
$\partial 2e$	3.00	3.02	11.97	4.52	178.30	1.21	0.72	0.52	0.97	0.48	0.01	0.08
$\partial 2g$	8.99	8.01	109.0	96.08	191.47	6.44	20.21	33.21	41.6	44.58	0.00	1.19
$\partial 2p$	11.99	11.03	121.0	100.6	369.77	7.66	20.93	33.74	42.6	45.06	0.01	1.26
PCV	13.88	25.03	26.39	33.71	84.34	43.99	11.18	12.58	11.2	10.83	8.98	31.19
GCA	12.02	21.32	25.05	32.95	60.69	40.36	10.98	12.48	11.0	10.77	0.00	30.23
h ²	0.75	0.73	0.90	0.96	0.52	0.84	0.97	0.98	0.98	0.99	0.00	0.94
	NPP		NSP		PL (cm)		100SW (g)		TSW (g)		RWC (mm ³)	
	WW	WS	WW	WS	WW	WS	WW	WS	WW	WS	WW	WS
MS	80.38	222.80	10.23	16.04	19.16	9.63	37.97	36.07	149.6	75.62	0.00	0.01
$\partial 2e$	7.44	6.46	1.34	0.62	0.72	0.55	1.17	1.29	12.16	2.86	0.00	0.00
$\partial 2g$	24.31	72.11	2.96	5.14	6.15	3.03	12.26	11.59	45.84	24.25	0.00	0.00
$\partial 2p$	31.76	78.57	4.30	5.76	6.86	3.58	13.44	12.89	58.00	27.11	0.00	0.01
PCV	43.28	84.18	17.39	27.03	16.97	14.57	21.71	24.34	40.49	65.08	3.84	12.34
GCA	37.87	80.65	14.43	25.53	16.06	13.41	20.75	23.08	35.99	61.56	2.29	11.12
h ²	0.77	0.92	0.69	0.89	90.32	85.43	0.91	0.90	0.79	0.89	36.20	81.33
	NB		RL		RB (g)							
	WW	WS	WW	WS	WW	WS						
MS	2.52	0.55	261.54	99.61	7.27	1.37						
$\partial 2e$	0.28	0.38	6.27	4.79	0.14	0.05						
$\partial 2g$	0.74	0.05	85.09	31.61	2.38	0.44						
$\partial 2p$	1.03	0.44	91.36	36.40	2.51	0.49						
PCV	25.20	21.51	36.43	39.87	50.50	33.78						
GCA	21.45	7.54	35.15	37.16	49.13	31.94						
h ²	72.50	12.43	93.14	86.83	94.63	89.38						
	SC (mm ²)		SB (g)		PHM (cm)							
	WW	WS	WW	WS	WW	WS						
MS	3271.60	3763.30	1138.06	565.85	839.97	137.09						
$\partial 2e$	506.20	565.60	16.13	5.631	16.33	24.48						
$\partial 2g$	921.80	1065.90	373.98	186.74	274.55	37.54						
$\partial 2p$	1428.00	1631.50	390.11	192.37	290.88	62.02						
PCV	13.08	16.55	47.49	61.10	31.81	29.59						
GCA	10.51	13.38	46.50	60.20	30.90	23.02						
h ²	0.65	0.65	95.87	97.07	94.39	60.53						

Note: MS = mean square values; $\partial 2e$ = error mean square; $\partial 2g$ = genotypic variance; $\partial 2p$ = phenotypic variance; PCV = phenotypic coefficient of variation; GCV = genotypic coefficient of variation; h² = broad sense heritability