

Appendix 9. Detailed annual rainfall (mm), tree and shrub foliage projected canopy cover (FPC%) for 77 land systems (Dawson 1974 and Mills and Lee 1990) encountered in the assessment of 20 grazing properties in south-west Queensland.

Land System	Area (ha)	Rainfall (mm)	Tree (FPC %)	Shrub (FPC %)	Total (FPC %)
A1	6991	385	0.0	0.0	0.0
A2	740	330	0.0	5.0	5.0
A2	848	310	0.0	0.0	0.0
A2	170	312	0.0	0.0	0.0
A2/A3	1225	300	0.0	3.0	3.0
A2/A3/W3	1776	320	0.0	0.0	0.0
A2/M2/W3	1170	312	0.0	0.0	0.0
A2/W3	2270	312	0.0	0.0	0.0
A2/W4	4512	303	0.0	0.0	0.0
A3	210	351	0.0	8.0	8.0
A3	138	380	1.0	5.0	6.0
A5/W4	5718	310	8.4	1.3	9.5
A6	1654	300	12.0	0.0	12.0
A6	2394	380	2.0	3.0	4.9
A6	1969	340	18.0	5.0	22.1
A6	1239	310	6.5	3.0	9.3
A6	316	303	5.5	6.0	11.2
C3	718	303	5.0	0.0	5.0
D1	312	399	7.5	10.0	16.8
D1	100	320	5.0	5.0	9.8
D7	1270	351	18.0	19.0	33.6
D7	1485	303	0.0	2.0	2.0
D7/S2	1292	351	11.0	20.0	28.8
D7/S2	9155	303	3.5	17.0	19.9
E1	1694	415	5.0	1.3	6.2
E1	176	450	13.0	0.0	13.0
E2	1837	500	9.8	3.6	13.0
E2	2269	425	9.2	5.0	13.7
E2	1671	385	11.6	10.0	20.4
E3	2090	490	11.0	5.0	15.5
E4	1646	415	12.5	1.5	13.8
E4	717	450	23.2	5.8	27.7
E4	1262	399	11.7	1.7	13.2
E4	2419	444	16.5	11.5	26.1
E4	2747	399	6.3	0.5	6.7
F2	132	340	0.0	0.0	0.0
F2	115	310	0.0	0.0	0.0
G1	110	351	20.0	18.0	34.4
G1	4147	300	10.0	3.0	12.7
G2	279	330	0.0	0.0	0.0
G2	6690	340	2.0	12.0	13.8
G2	262	340	6.0	5.0	10.7
G2	346	303	3.0	17.0	19.5
G2	1034	399	25.0	12.5	34.4

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Land System	Area (ha)	Rainfall (mm)	Tree (FPC %)	Shrub (FPC %)	Total (FPC %)
G2/H2	4796	330	12.0	7.0	18.2
G2/H2	501	330	0.0	12.0	12.0
G2/H2	6985	310	7.5	1.5	8.9
G2/H2	3644	310	6.9	1.0	7.8
G2/H2/H4	785	303	5.0	0.0	5.0
G3	2432	385	4.0	1.2	5.2
G4	3849	310	5.0	0.0	5.0
G5	134	330	15.0	10.0	23.5
G5	122	330	16.0	15.0	28.6
G5	1800	312	25.0	0.0	25.0
G5/W6	1460	300	12.0	9.0	19.9
G5/W6	1170	320	19.0	5.0	23.1
H1	6640	500	15.5	0.0	15.5
H1	3848	450	20.3	3.0	22.7
H1	421	330	5.0	10.0	14.5
H1cleared	416	490	1.0	0.0	1.0
H1natural	4408	490	25.4	0.0	25.4
H2	235	330	0.0	0.0	0.0
H2	4559	351	4.0	6.0	9.8
H2	3462	380	5.0	13.0	17.4
H2	12457	425	11.4	6.0	16.7
H2	2362	310	7.0	0.0	7.0
H2	13669	385	3.7	14.1	17.3
H2	4060	312	0.0	0.0	0.0
H2/G2	4566	300	5.0	0.0	5.0
H2/G2	4330	312	7.0	0.0	7.0
H2/G2	9840	312	0.0	0.0	0.0
H2/H4	3181	330	13.0	4.0	16.5
H2/H4	7221	300	6.0	1.0	6.9
H2/H4	928	380	6.0	6.0	11.6
H2/H4	6032	330	5.0	2.0	6.9
H2/H4	1310	312	0.0	0.0	0.0
H2/H4	2060	303	9.0	0.0	9.0
H2/M2	4065	300	15.0	0.0	15.0
H2/M2	1540	312	0.0	0.0	0.0
H3	15954	415	6.4	5.9	11.9
H3	684	450	19.5	0.0	19.5
H3	2606	351	1.0	15.0	15.9
H3	536	303	12.0	9.0	19.9
H3	12029	444	12.0	1.7	13.5
H3/H4	4905	303	6.7	9.5	15.6
H3/R3	3395	310	9.0	1.5	10.4
H3/R5	4711	351	0.0	4.0	4.0
H4	178	330	10.0	4.0	13.6
H4	2175	300	15.0	5.0	19.3
H4	553	399	6.0	0.0	6.0
H4	2029	310	1.0	1.5	2.5
H4	285	340	5.0	4.0	8.8
H4	9613	399	4.2	19.5	22.9
H4/G2	980	340	16.0	3.0	18.5
H4/G2	1536	310	6.0	4.0	9.8
H4/G2	6379	310	8.8	3.8	12.2

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Land System	Area (ha)	Rainfall (mm)	Tree (FPC %)	Shrub (FPC %)	Total (FPC %)
H4/H2	565	330	4.0	2.5	6.4
H4/H2	17024	340	7.0	3.0	9.8
H4/R2	8745	380	20.0	8.0	26.4
H4/R5	134	303	5.0	0.0	5.0
L1	874	415	0.0	0.0	0.0
L1	58	330	0.0	0.0	0.0
L1	902	351	27.0	12.0	35.8
L1	2640	399	0.0	0.0	0.0
L1	613	303	0.0	0.0	0.0
L1	1581	444	8.5	0.0	8.5
L2	499	450	10.4	0.0	10.4
L2	908	351	0.0	0.0	0.0
L2	891	320	3.5	4.0	7.4
L2	2576	399	5.2	0.8	6.0
M1	9899	500	15.4	0.0	15.4
M1	72	330	18.0	0.0	18.0
M1	1399	300	15.0	19.0	31.2
M1	678	380	13.0	5.0	17.4
M1	386	340	6.0	0.0	6.0
M1	1416	303	21.0	0.0	21.0
M1/M2	775	340	24.0	6.0	28.6
M1	3889	490	3.2	0.0	3.2
M1	6972	490	16.9	4.0	20.2
M1	3055	490	30.6	0.0	30.6
M2	12324	415	10.9	5.1	15.4
M2	1936	330	7.0	0.0	7.0
M2	16648	450	19.9	0.3	20.1
M2	1848	351	19.0	0.0	19.0
M2	3920	380	12.0	2.0	13.8
M2	26078	399	10.7	5.4	15.6
M2	2684	330	14.0	2.0	15.7
M2	253	310	15.0	0.0	15.0
M2	4588	340	18.0	0.0	18.0
M2	5050	312	14.2	0.0	14.2
M2	13500	444	12.0	9.6	20.4
M2	18958	399	12.2	13.3	23.9
M2/H2	1105	330	10.0	27.0	34.3
M2/H2	5913	351	12.0	5.0	16.4
M2/H2	4698	300	10.0	0.0	10.0
M2/H2	1126	380	7.0	5.0	11.7
M2/H2	2481	320	9.0	14.0	21.7
M2/M1	8414	351	19.0	0.0	19.0
M2/M1	2500	340	13.0	4.0	16.5
M2/M3	5203	380	12.0	8.0	19.0
M2/S2	1893	351	10.0	8.0	17.2
M2/S2	1964	303	14.5	2.0	16.2
M2cleared	2969	450	13.6	1.0	14.5
M3	144	330	20.0	8.0	26.4
M3	672	380	7.0	18.0	23.7
M4	4822	425	11.8	2.8	14.2
M4/H2	15302	340	13.0	6.0	18.2
M5	1978	385	10.3	7.0	16.5

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Land System	Area (ha)	Rainfall (mm)	Tree (FPC %)	Shrub (FPC %)	Total (FPC %)
N1	4953	450	6.0	26.3	30.8
N1	9100	399	12.7	15.0	25.8
N1	2200	444	11.3	18.4	27.6
N1	1951	399	0.0	7.0	7.0
R1	1124	490	30.0	0.0	30.0
R2	1382	415	8.4	37.3	42.6
R2	2681	425	10.3	38.3	44.7
R2	64	340	0.0	0.0	0.0
R2/H4	8375	300	0.0	7.0	7.0
R2/H4	3161	340	6.0	13.0	18.2
R3	5511	385	11.0	22.0	30.6
R5	6671	310	10.0	5.0	14.5
R5	280	312	0.0	0.0	0.0
R5	556	303	9.0	0.0	9.0
R6/H4/G5	7504	340	19.0	6.0	23.9
S2	4820	330	6.0	27.0	31.4
S2	6760	351	7.0	24.0	29.3
S2	166	385	18.0	2.0	19.6
S2	12635	320	10.6	20.6	29.0
S2	9310	312	8.0	23.6	29.7
S2	2505	399	5.3	14.0	18.5
S3	3660	312	8.6	14.5	21.9
W1	1064	415	5.0	0.0	5.0
W1	1418	330	5.0	0.0	5.0
W1	1878	330	5.0	0.0	5.0
W1	1131	385	11.0	5.6	16.0
W1/A3	1414	330	0.0	0.0	0.0
W2	413	330	0.0	8.0	8.0
W3	1172	330	0.0	24.0	24.0
W3	404	351	0.0	0.0	0.0
W3	584	340	0.0	0.0	0.0
W3	2374	340	11.0	7.0	17.2
W3	7310	312	0.0	0.0	0.0
W3/A2	2610	312	0.0	0.0	0.0
W3/A5	3230	312	0.0	0.0	0.0
W3/A6	7507	330	14.0	7.0	20.0
W3/G5	1280	340	15.0	7.0	21.0
W4	1194	380	8.0	0.0	8.0
W4	368	330	10.0	11.0	19.9
W4	970	312	0.0	0.0	0.0
W6	197	330	8.0	13.0	20.0
W6	515	300	0.0	0.0	0.0
W6	154	330	12.0	19.0	28.7
W6	695	340	25.0	0.0	25.0
W6	1151	385	20.0	0.0	20.0
W7	2250	312	0.0	0.0	0.0
Sum	658325				
Average	3393	357	8.7	5.6	13.7
Maximum	26078	500	30.6	38.3	44.7
Minimum	58	300	0.0	0.0	0.0

Appendix 10. Recent validation of the GRASP model to independent data from south-west Queensland.

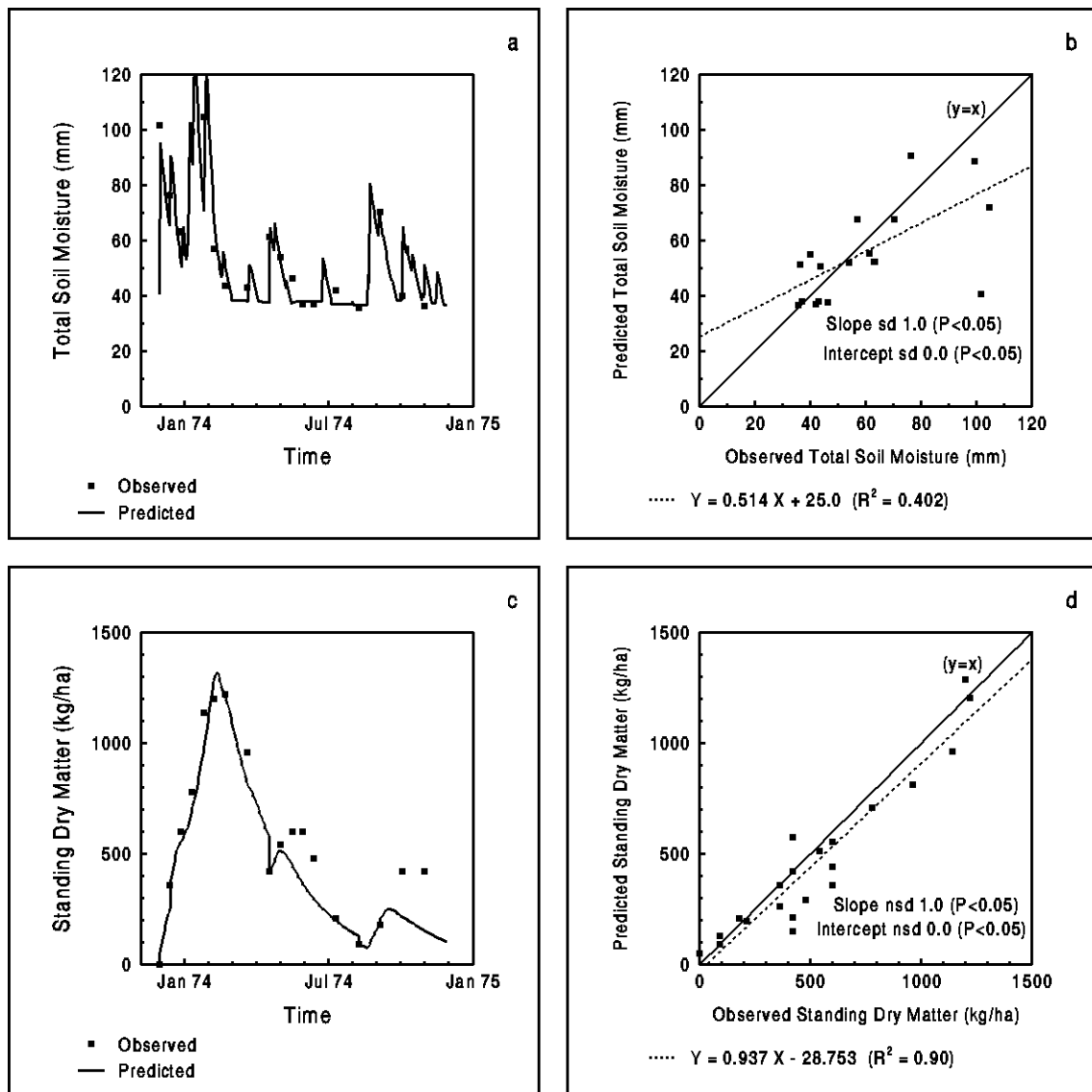


Figure 10.1 Predicted and observed standing dry matter and total soil moisture using the data of Christie (1978) to validate the GRASP model to mulga pastures near Charleville in south-west Queensland (Same data as Figure 4.14 on Page 68).

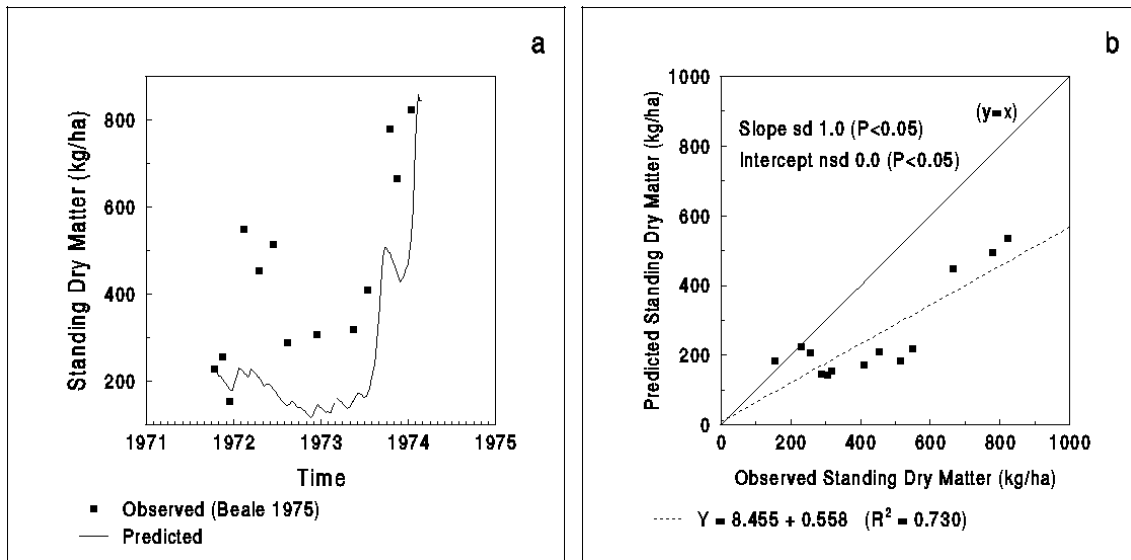


Figure 10.2 Predicted and observed standing dry matter using the data of Beale (1975) to validate the GRASP model to mulga pastures at 'Halton' near Charleville in south-west Queensland.

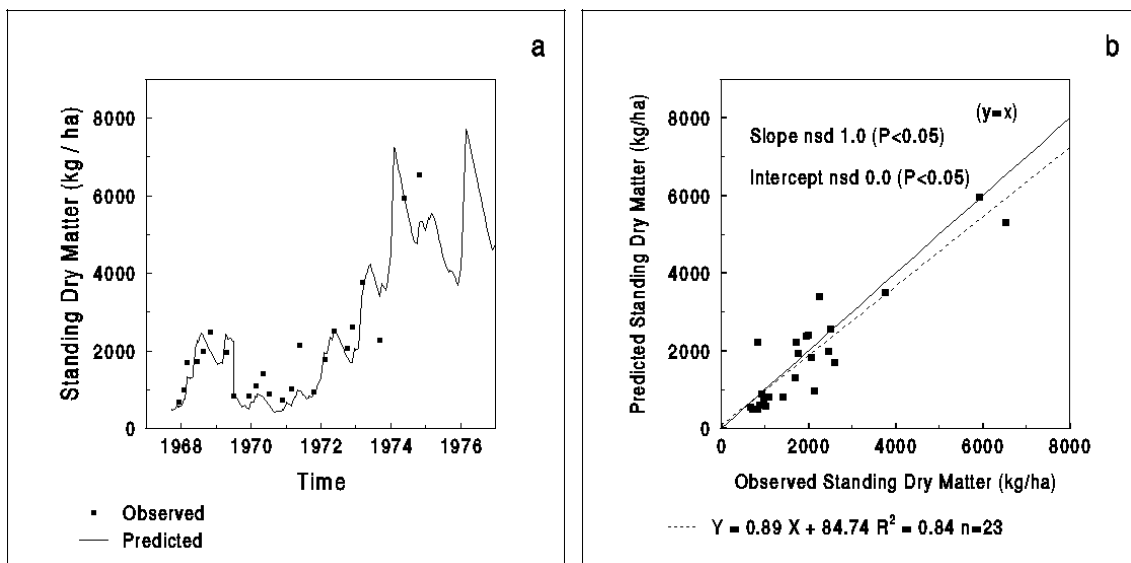


Figure 10.3 Predicted and observed standing dry matter using the data of Orr *et al.* (in prep.) to validate the GRASP model to buffel grass pastures on cleared gidyea country in the 'Eastwood' grazing trial (0.4 ha/DSE treatment) near Blackall in south-west Queensland.

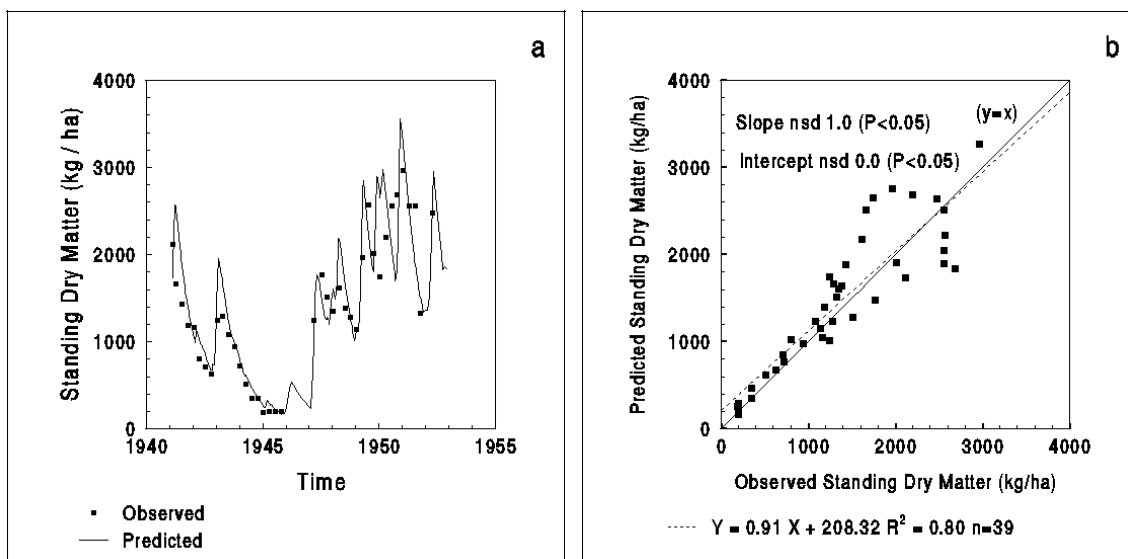


Figure 10.4 Predicted and observed standing dry matter using the data of Roe and Allen (1945,1993) to validate the GRASP model to mitchell grass pastures in the 'Gilruth Plains' grazing trial (1 DSE/2ha treatment) near Cunnamulla in south-west Queensland.