

Supplemental Material**Reducing rainfall amount has a greater negative effect on the productivity of grassland plant species than reducing rainfall frequency***Eleanor V. J. Gibson-Forty^{A,B,C}, Kirk L. Barnett^A, David T. Tissue^A and Sally A. Power^{A,D}*^AHawkesbury Institute for the Environment, Western Sydney University, Locked Bag 1797, Penrith, NSW 2751, Australia.^BCardiff University, School of Biosciences, The Sir Martin Evans Building, Museum Avenue, Cardiff, CF10 3AX, UK.^CPresent address: Department of Evolution and Ecology, University Tübingen, Auf der Morgenstelle 5, 72 076, Tübingen, Germany.^DCorresponding author. Email: s.power@westernsydney.edu.au**Table S1. Summary statistics for treatment effects on total biomass, aboveground biomass, belowground biomass, root: shoot (R:S) ratio, root biomass of upper (upper root biomass) and lower (lower root biomass) 50% of soil profile, upper: lower root biomass (U:L) ratio**

Treatments were control (C), reduced frequency (RF) and reduced magnitude (RM) rainfall. Values shown are from a linear mixed effects model testing for the effects of rainfall treatment with species as a random factor. Far right-hand column gives significance of differences between pairs of treatments using Tukey's HSD test. $P \leq 0.05$ are highlighted in bold.

Biomass parameter	Treatment				Tukey HSD Post Hoc value		
	Df	Den Df	F value	P value	C: RF	C : RM	RM : RF
Total biomass	2	64	104.40	<0.001	0.001	<0.001	<0.001
Aboveground	2	64	79.21	<0.001	0.037	<0.001	<0.001
Belowground	2	64	39.51	<0.001	0.005	<0.001	<0.001
Root: shoot ratio	2	64	1.41	0.25	0.303	0.331	0.994
Upper root	2	64	13.56	<0.001	0.002	<0.001	0.25
Lower root	2	64	50.73	<0.001	0.191	<0.001	<0.001
Upper: lower root	2	64	10.92	<0.001	0.357	0.004	<0.001

Fig. S1. Environmental data for the experimental period (December 2013 to March 2014): temperature (Temp; dark black line), relative humidity (RH; light black line) and photosynthetically active radiation (PAR; inset). Data are presented as mean (black solid lines) maximum (red dotted lines) or maximum (blue dotted lines) values for temperature and relative humidity; minimum PAR was not plotted because it was always equal to 0.

