

Time segment	TS1			TS2			TS3			TS4		
Dates	from 1 August 2015 to 18 March 2016			from 19 March 2016 to 5 June 2016			from 8 June 2016 to 8 July 2016			from 9 July 2016 to 6 October 2016		
Vegetation stages	senescence, cutting, dormancy			growing			growing			cutting		
Antenna height (m)	29.4			29.4			3.3			3.3		
Sampling interval (s)	10			1			1			1		
<i>N</i>	220			68			31			90		
Independent soil moisture estimates	ISBA 1 cm	in situ 1cm	in situ 5 cm	ISBA 1 cm	in situ 1cm	in situ 5 cm	ISBA 1 cm	in situ 1cm	in situ 5 cm	ISBA 1 cm	in situ 1cm	in situ 5 cm
MAE	0.32	0.33	0.30 (0.031 $\text{m}^3 \text{m}^{-3}$ )	0.47	0.58	0.56 (0.039 $\text{m}^3 \text{m}^{-3}$ )	0.34	0.54	0.65 (0.035 $\text{m}^3 \text{m}^{-3}$ )	0.33	0.33	0.38 (0.013 $\text{m}^3 \text{m}^{-3}$ )
RMSE	0.40	0.42	0.40 (0.040 $\text{m}^3 \text{m}^{-3}$ )	0.61	0.71	0.65 (0.048 $\text{m}^3 \text{m}^{-3}$ )	0.51	0.69	0.80 (0.043 $\text{m}^3 \text{m}^{-3}$ )	0.42	0.44	0.62 (0.019 $\text{m}^3 \text{m}^{-3}$ )
SDD	0.40	0.42	0.40 (0.037 $\text{m}^3 \text{m}^{-3}$ )	0.61	0.71	0.65 (0.039 $\text{m}^3 \text{m}^{-3}$ )	0.51	0.69	0.80 (0.036 $\text{m}^3 \text{m}^{-3}$ )	0.42	0.44	0.62 (0.018 $\text{m}^3 \text{m}^{-3}$ )
$R^2$	0.84	0.83	0.85	0.66	0.55	0.62	0.75	0.57	0.45	0.83	0.81	0.65