

**Remotely sensed soil moisture can capture dynamics relevant to plant water uptake**

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Table S1

**Introduction**

This file includes Table S1 and its references that are used to create Figure 3.

Table S1. Field isotropic tracer studies across the globe as displayed in Fig. 3. Crop species are specified and partitioned in the table due to wide variability of cultivated vegetation types (includes both herbaceous and woody species). This dataset is stored in <https://doi.org/10.5281/zenodo.7527459>.

Reference	Reference Index	Plant Category	Latitude	Longitude	Mean Annual Precipitation (mm)	Uptake Range Top (cm)	Uptake Range Bottom (cm)	Isotope Sampling Months	Decay of Water Uptake With Depth	Temporary Uptake of Upper Layers
Asbjornsen et al. 2007	1	Crop (Corn)	41.5	-93.25	882	0	20	Jul.	No	No
Asbjornsen et al. 2008	2	Grass	41.5	-93	882	0	20	May to Sep.	No	No
Asbjornsen et al. 2008	2	Crop (Soybean)	41.5	-93	882	0	20	May to Sep.	No	No
Asbjornsen et al. 2008	2	Crop (Corn)	41.5	-93	882	0	20	May to Sep.	No	No
Asbjornsen et al. 2008	2	Shrub	41.5	-93	882	0	55	May to Sep.	Yes	Yes
Asbjornsen et al. 2008	2	Tree	41.5	-93	882	0	150	May to Sep.	No	Yes
Bachmann et al. 2015	3	Grass	50.9	11.5	587	0	10	Apr., Jun., Sep.	No	No
Brinkmann et al. 2019	4	Tree	47.5	8.3	1110	0	70	Apr. to Nov.	No	Yes
Brooks et al. 2002	5	Tree	44	-121	550	0	200	Jul. to Sep.	No	Yes
Case et al. 2020	6	Grass	-24	31.5	479	0	10	May, Jun.	No	No
Case et al. 2020	6	Tree	-24	31.5	479	0	50	May, Jun.	Yes	Yes
Case et al. 2020	6	Grass	-24	31.5	510	0	20	May, Jun.	Yes	No
Case et al. 2020	6	Tree	-24	31.5	510	0	100	May, Jun.	No	No
Case et al. 2020	6	Grass	-24	31.5	600	0	50	May, Jun.	Yes	Yes
Case et al. 2020	6	Tree	-24	31.5	600	0	100	May, Jun.	Yes	Yes
Chimner et al. 2004	7	Shrub	37.7	-105.8	121	0	200	Jun., Aug.	No	Yes
Clement et al. 2022	8	Crop (Alfalfa)	55.7	12.3	523	0	100	Jun. to Aug.	Yes	Yes
Clement et al. 2022	8	Crop (Wheatgrass)	55.7	12.3	523	0	100	Jun. to Aug.	Yes	Yes
Dai et al. 2015	9	Shrub	44.33	87.9	125	0	300	Apr. to Sep.	No	Yes
Eggemeyer et al. 2009	10	Grass	41.9	-100.3	573	5	50	Jan. to Nov.	No	No
Eggemeyer et al. 2009	10	Tree	41.9	-100.3	573	5	90	Jan. to Nov.	Yes	Yes
Ellsworth et al. 2015	11	Tree	27.2	-81.33	1346	20	150	Jan. to Dec.	No	No
Goldsmith et al. 2012	12	Tree	19.75	-97	3186	0	40	Mar., May	No	No
Goldsmith et al. 2012	12	Tree	19.75	-97	3186	60	80	Mar., May	No	No
Hahn et al. 2021	13	Tree	0.5	35.3	1988	0	150	Sep. to Dec.	Yes	Yes
Hartsough et al. 2008	14	Tree	19.5	-103.5	1100	0	30	Mar., Nov.	No	No
Hoekstra et al. 2014	15	Grass	47.47	8.9	927	0	40	Jun. to Aug.	No	No
Hoekstra et al. 2014	15	Grass	47.4	8.5	1176	0	40	Jun. to Aug.	No	No
Jackson et al. 1995	16	Tree	9	-79.5	2600	20	100	Dec. to May	No	No

Jackson et al. 1999	17	Tree	-15.8	-47.8	1550	0	300	Aug., Sep.	No	No
Kulmatiski et al. 2010	18	Grass	-25	31.5	746	0	20	Oct., Nov., Feb., Apr.	Yes	No
Kulmatiski et al. 2010	18	Tree	-25	31.5	746	0	50	Oct., Nov., Feb., Apr.	No	No
Kulmatiski et al. 2013	19	Grass	-25	31.5	746	0	20	Nov., Feb., May	Yes	No
Kulmatiski et al. 2013	19	Tree	-25	31.5	746	0	20	Nov., Feb., May	Yes	No
Le Roux et al. 1995	20	Grass	6.25	-5	1210	10	20	May, Nov., Jan.	No	No
Le Roux et al. 1995	20	Shrub	6.25	-5	1210	10	30	May, Nov., Jan.	No	No
Li et al. 2006	21	Tree	48	108.5	296	0	30	Jun. to Oct.	No	No
Liu et al. 2010	22	Tree	21.9	101.25	1487	0	60	Mar., Dec.	No	Yes
Liu et al. 2010	22	Tree	21.9	101.25	1487	0	150	Mar., Dec.	No	Yes
Liu et al. 2011	23	Shrub	30.85	103	711	0	30	Aug.	No	No
Liu et al. 2019	24	Tree	37.5	114.5	521	0	40	Mar. to Sep.	No	No
Ma et al. 2018	25	Crop (Wheat)	39.5	116.5	540	0	70	Jul., Aug.	Yes	Yes
Meinzer et al. 1999	26	Tree	9	-79.5	2600	0	100	Jan. to May	No	Yes
Moreira et al. 2000	27	Grass	-3	-47	1800	0	100	Apr. Jun., Jul., Dec.	Yes	No
Moreira et al. 2000	27	Shrub	-3	-47	1800	0	25	Apr. Jun., Jul., Dec.	No	No
Munoz-Villers et al. 2020	28	Crop (Coffee)	19.5	-97	1765	0	15	Jan. to May, Aug.	No	No
Munoz-Villers et al. 2020	28	Tree	19.5	-97	1765	0	120	Jan. to May, Aug.	Yes	Yes
Nippert and Knapp 2007	29	Grass	39	-96	850	0	30	Jun. to Aug.	Yes	No
Nippert and Knapp 2007	29	Shrub	39	-96	850	0	30	Jun. to Aug.	Yes	No
Ogle et al. 2004	30	Shrub	33	-107	230	0	70	Jul. to Aug.	Yes	Yes
Ohte et al. 2003	31	Tree	39	109.15	362	0	150	Sep.	No	No
Ohte et al. 2003	31	Shrub	39	109.15	362	0	50	Sep.	Yes	No
Penna et al. 2021	32	Crop (Apple Tree)	46.6	10.7	480	0	40	Jun. to Sep.	Yes	No
Plamboeck et al. 1999	33	Tree	64.25	19.75	614	0	55	Jul., Aug.	Yes	No
Prechsl et al. 2015	34	Grass	47.2	8.3	1110	0	30	Apr. to Oct.	Yes	No
Prechsl et al. 2015	34	Grass	46.5	9.75	950	0	30	Apr. to Oct.	Yes	No
Ratajczak et al. 2011	35	Shrub	39.1	-96.6	835	0	75	Jun. to Sep.	Yes	No
Ratajczak et al. 2011	35	Grass	39.1	-96.6	835	0	30	Jun. to Sep.	Yes	No
Retzlaff et al. 2001	36	Tree	34.8	-79.6	1200	0	120	Mar. to Nov.	Yes	Yes

Schulze et al. 1996	37	Grass	-45.3	-69.8	125	0	30	Mar.	Yes	No
Schulze et al. 1996	37	Grass	-45.3	-70.3	160	0	30	Mar.	Yes	No
Schulze et al. 1996	37	Grass	-44.8	-71.3	290	0	30	Mar.	Yes	No
Schulze et al. 1996	37	Tree	-44.8	-71.6	770	0	80	Mar.	No	Yes
Sun et al. 2021	38	Crop (Pea)	47.5	8.5	994	0	20	May to Jul.	Yes	No
Sun et al. 2021	38	Crop (Barley)	47.5	8.5	994	0	60	May to Jul.	Yes	No
Wang et al. 2010	39	Crop (Corn)	34.9	110.75	590	0	50	May to Oct.	Yes	Yes
Wang et al. 2010	39	Crop (Cotton)	34.9	110.75	590	0	90	May to Oct.	Yes	Yes
Weltzin et al. 1997	40	Grass	31.5	-110.3	602	0	35	Apr., Sep.	Yes	No
Weltzin et al. 1997	40	Tree	31.5	-110.3	602	0	90	Apr., Sep.	No	Yes
Williams et al. 2000	41	Tree	34	-110	430	0	50	May to Sep.	No	Yes
Williams et al. 2000	41	Tree	39	-110	390	0	50	May to Sep.	No	Yes
Williams et al. 2000	41	Tree	39	-110	390	50	100	May to Sep.	No	No
Wu et al. 2014	42	Shrub	44.25	87.75	160	0	300	Mar. to Oct.	No	No
Wu et al. 2014	42	Shrub	44.25	87.75	160	0	60	Mar. to Oct.	Yes	No
Wu et al. 2016	43	Crop (Corn)	37.8	102.9	164	0	80	Jun. to Aug.	Yes	Yes
Yang et al. 2015	44	Crop (Corn)	38.5	100.33	129	0	10	Apr. to Sep.	No	No
Zhu et al. 2011	45	Shrub	38.5	103	111	0	120	May, Jul., Sep.	No	Yes

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