



*Supplement of*

## **Temperature exerts no influence on organic matter $\delta^{13}\text{C}$ of surface soil along the 400 mm isopleth of mean annual precipitation in China**

**Yufu Jia et al.**

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Supplement Table 1 All soil  $\delta^{13}\text{C}$  data and the Information of the sampling sites.

Site name	MAT/°C	SMT/°C	MAP/mm	Alt./m	Lat./N°	Lon./E°	$\delta^{13}\text{C}$ (‰)	Vegetation type	Dominant species	Soil types
LangKaZi	3	13.9	376	4492	29.06	90.39	-22.34	Alpine grassland	<i>Stipa</i> , <i>Festuca</i> and <i>Carex</i>	Matti-GelicCambosols (Cambisols)
LangKaZi	3	13.9	376	4492	29.06	90.39	-22.89	Alpine grassland	<i>Stipa</i> , <i>Festuca</i> and <i>Carex</i>	Matti-GelicCambosols (Cambisols)
LangKaZi	3	13.9	376	4492	29.06	90.39	-23.66	Alpine grassland	<i>Stipa</i> , <i>Festuca</i> and <i>Carex</i>	Matti-GelicCambosols (Cambisols)
RiKaZe	6.3	14	420	3865	29.33	88.98	-21.95	Alpine grassland	<i>Stipa</i> , <i>Festuca</i> and <i>Carex</i>	Matti-GelicCambosols (Cambisols)
RiKaZe	6.3	14	420	3865	29.33	88.98	-18.76	Alpine grassland	<i>Stipa</i> , <i>Festuca</i> and <i>Carex</i>	Matti-GelicCambosols (Cambisols)
RiKaZe	6.3	14	420	3865	29.33	88.98	-20.43	Alpine grassland	<i>Stipa</i> , <i>Festuca</i> and <i>Carex</i>	Matti-GelicCambosols (Cambisols)
NaQu	-3.3	7.4	406	4519	31.41	91.96	-22.82	Alpine meadow	<i>Kobresia</i>	Matti-GelicCambosols (Cambisols)
NaQu	-3.3	7.4	406	4519	31.41	91.96	-22.91	Alpine meadow	<i>Kobresia</i>	Matti-GelicCambosols (Cambisols)
NaQu	-3.3	7.4	406	4519	31.41	91.96	-23.23	Alpine meadow	<i>Kobresia</i>	Matti-GelicCambosols (Cambisols)
NieRong	-2.2	8.2	400	4731	32.09	92.27	-24.76	Alpine meadow	<i>Kobresia</i>	Matti-GelicCambosols (Cambisols)
NieRong	-2.2	8.2	400	4731	32.09	92.27	-22.51	Alpine meadow	<i>Kobresia</i>	Matti-GelicCambosols (Cambisols)
NieRong	-2.2	8.2	400	4731	32.09	92.27	-21.4	Alpine meadow	<i>Kobresia</i>	Matti-GelicCambosols (Cambisols)
ZhiDuo	-1.2	6.3	394	4360	33.77	95.66	-23.27	Alpine meadow	<i>Kobresia</i>	Matti-GelicCambosols (Cambisols)
ZhiDuo	-1.2	6.3	394	4360	33.77	95.66	-24.29	Alpine meadow	<i>Kobresia</i>	Matti-GelicCambosols (Cambisols)
ZhiDuo	-1.2	6.3	394	4360	33.77	95.66	-24.47	Alpine meadow	<i>Kobresia</i>	Matti-GelicCambosols (Cambisols)
QuMaLai	-5.3	10.8	391.7	4727	34.16	95.9	-22.03	Alpine meadow	<i>Kobresia</i>	Matti-GelicCambosols (Cambisols)
QuMaLai	-5.3	10.8	391.7	4727	34.16	95.9	-27.07	Alpine meadow	<i>Kobresia</i>	Matti-GelicCambosols (Cambisols)
QuMaLai	-5.3	10.8	391.7	4727	34.16	95.9	-22.95	Alpine meadow	<i>Kobresia</i>	Matti-GelicCambosols (Cambisols)
TongDe	-0.5	7	371	3258	35.27	100.64	-22.37	Subalpine grassland	<i>Stipa</i> and <i>Hippolytia</i>	Hapli- CryicAridosolsI (Leptosols)
TongDe	-0.5	7	371	3258	35.27	100.64	-22.25	Subalpine grassland	<i>Stipa</i> and <i>Hippolytia</i>	Hapli- CryicAridosolsI (Leptosols)
TongDe	-0.5	7	371	3258	35.27	100.64	-20.06	Subalpine grassland	<i>Stipa</i> and <i>Hippolytia</i>	Hapli- CryicAridosolsI (Leptosols)
TongRen	5.2	19.5	425.7	2467	35.55	102.03	-24.06	Subalpine grassland	<i>Stipa</i> and <i>Hippolytia</i>	Hapli- CryicAridosolsI (Leptosols)
TongRen	5.2	19.5	425.7	2467	35.55	102.03	-22.89	Subalpine grassland	<i>Stipa</i> and <i>Hippolytia</i>	Hapli- CryicAridosolsI (Leptosols)
TongRen	5.2	19.5	425.7	2467	35.55	102.03	-25.1	Subalpine grassland	<i>Stipa</i> and <i>Hippolytia</i>	Hapli- CryicAridosolsI (Leptosols)

HuangYuan	1.5	9.5	408.9	2725	37.02	100.8	-22.62	Subalpine grassland	<i>Stipa</i> and <i>Hippolytia</i>	Hapli- CryicAridosolsl (Leptosols)
HuangYuan	1.5	9.5	408.9	2725	37.02	100.8	-23.37	Subalpine grassland	<i>Stipa</i> and <i>Hippolytia</i>	Hapli- CryicAridosolsl (Leptosols)
HuangYuan	1.5	9.5	408.9	2725	37.02	100.8	-22.72	Subalpine grassland	<i>Stipa</i> and <i>Hippolytia</i>	Hapli- CryicAridosolsl (Leptosols)
HaiYan	1.2	15.8	400	3233	36.69	101.3	-22.07	Subalpine grassland	<i>Stipa</i> and <i>Hippolytia</i>	Hapli- CryicAridosolsl (Leptosols)
HaiYan	1.2	15.8	400	3233	36.69	101.3	-23.98	Subalpine grassland	<i>Stipa</i> and <i>Hippolytia</i>	Hapli- CryicAridosolsl (Leptosols)
HaiYan	1.2	15.8	400	3233	36.69	101.3	-23.24	Subalpine grassland	<i>Stipa</i> and <i>Hippolytia</i>	Hapli- CryicAridosolsl (Leptosols)
YuZhong	6.6	20.1	403	2361	35.78	104.05	-23.42	Temperate coniferous and broad-leaved mixed forests	<i>Pinustabulaeformis</i>	Hapli-UsticArgosols (Luvisols)
YuZhong	6.6	20.1	403	2361	35.78	104.05	-22.48	Temperate coniferous and broad-leaved mixed forests	<i>Pinustabulaeformis</i>	Hapli-UsticArgosols (Luvisols)
YuZhong	6.6	20.1	403	2361	35.78	104.05	-24.79	Temperate coniferous and broad-leaved mixed forests	<i>Pinustabulaeformis</i>	Hapli-UsticArgosols (Luvisols)
XiJi	5.3	16.8	400	1982	36.02	105.88	-23.83	Temperate meadow steppe	<i>Stipa</i> and <i>Hippolytia</i>	Calci-OrthicAridosols(Calcisols)
XiJi	5.3	16.8	400	1982	36.02	105.88	-24.44	Temperate meadow steppe	<i>Stipa</i> and <i>Hippolytia</i>	Calci-OrthicAridosols(Calcisols)
XiJi	5.3	16.8	400	1982	36.02	105.88	-24.82	Temperate meadow steppe	<i>Stipa</i> and <i>Hippolytia</i>	Calci-OrthicAridosols(Calcisols)
JingBian	7.8	20	395.4	1394	37.74	108.91	-23.54	Semi-desert grasslands	<i>Stipa</i> 、 <i>Hippolytia</i> and <i>Ajania</i>	Calci-OrthicAridosols(Calcisols)
JingBian	7.8	20	395.4	1394	37.74	108.91	-24.91	Semi-desert grasslands	<i>Stipa</i> 、 <i>Hippolytia</i> and <i>Ajania</i>	Calci-OrthicAridosols(Calcisols)
JingBian	7.8	20	395.4	1394	37.74	108.91	-24.13	Semi-desert grasslands	<i>Stipa</i> 、 <i>Hippolytia</i> and <i>Ajania</i>	Calci-OrthicAridosols(Calcisols)
HengShan	8.5	22.2	397	1131	38.04	109.24	-23.93	Semi-desert grasslands	<i>Stipa</i> 、 <i>Hippolytia</i> and <i>Ajania</i>	Calci-OrthicAridosols(Calcisols)
HengShan	8.5	22.2	397	1131	38.04	109.24	-23.99	Semi-desert grasslands	<i>Stipa</i> 、 <i>Hippolytia</i> and <i>Ajania</i>	Calci-OrthicAridosols(Calcisols)
HengShan	8.5	22.2	397	1131	38.04	109.24	-23.51	Semi-desert grasslands	<i>Stipa</i> 、 <i>Hippolytia</i> and <i>Ajania</i>	Calci-OrthicAridosols(Calcisols)
ShenMu	8.9	21.5	393	1131	38.84	110.44	-24.79	Semi-desert grasslands	<i>Stipa</i> 、 <i>Hippolytia</i> and <i>Ajania</i>	Calci-OrthicAridosols(Calcisols)
ShenMu	8.9	21.5	393	1131	38.84	110.44	-25.58	Semi-desert grasslands	<i>Stipa</i> 、 <i>Hippolytia</i> and <i>Ajania</i>	Calci-OrthicAridosols(Calcisols)
ShenMu	8.9	21.5	393	1131	38.84	110.44	-23.97	Semi-desert grasslands	<i>Stipa</i> 、 <i>Hippolytia</i> and <i>Ajania</i>	Calci-OrthicAridosols(Calcisols)
HeQu	8.8	22.3	426	912	39.33	111.19	-21.08	Temperate meadow steppe	<i>Bothriochloa</i> and <i>Pennisetum</i>	MottlicCalci-OrthicAridosols(Calcisols)
HeQu	8.8	22.3	426	912	39.33	111.19	-22.91	Temperate meadow steppe	<i>Bothriochloa</i> and <i>Pennisetum</i>	MottlicCalci-OrthicAridosols(Calcisols)
HeQu	8.8	22.3	426	912	39.33	111.19	-23.59	Temperate meadow steppe	<i>Bothriochloa</i> and <i>Pennisetum</i>	MottlicCalci-OrthicAridosols(Calcisols)

ZhunGeErQi	7.5	20	400	1236	39.87	111.18	-23.98	Temperate meadow steppe	<i>Stipa</i> and <i>Aneuralepidium</i>	MottlicCalci-OrthicAridosols(Calcisols)
ZhunGeErQi	7.5	20	400	1236	39.87	111.18	-24.06	Temperate meadow steppe	<i>Stipa</i> and <i>Aneuralepidium</i>	MottlicCalci-OrthicAridosols(Calcisols)
ZhunGeErQi	7.5	20	400	1236	39.87	111.18	-21.47	Temperate meadow steppe	<i>Stipa</i> and <i>Aneuralepidium</i>	MottlicCalci-OrthicAridosols(Calcisols)
FengZhen	4.7	19.4	413	1236	40.45	113.19	-21.79	Temperate typical steppe	<i>Stipa</i> and <i>Aneuralepidium</i>	TypicCalci-UsticIsohumosols (Chernozems)
FengZhen	4.7	19.4	413	1236	40.45	113.19	-22.88	Temperate typical steppe	<i>Stipa</i> and <i>Aneuralepidium</i>	TypicCalci-UsticIsohumosols (Chernozems)
FengZhen	4.7	19.4	413	1236	40.45	113.19	-21.32	Temperate typical steppe	<i>Stipa</i> and <i>Aneuralepidium</i>	TypicCalci-UsticIsohumosols (Chernozems)
DuoLun	2.4	17.7	407	1245	42.18	116.47	-22.94	Temperate typical steppe	<i>Stipa</i> and <i>Aneuralepidium</i>	TypicCalci-UsticIsohumosols (Chernozems)
DuoLun	2.4	17.7	407	1245	42.18	116.47	-22.7	Temperate typical steppe	<i>Stipa</i> and <i>Aneuralepidium</i>	TypicCalci-UsticIsohumosols (Chernozems)
DuoLun	2.4	17.7	407	1245	42.18	116.47	-22.53	Temperate typical steppe	<i>Stipa</i> and <i>Aneuralepidium</i>	TypicCalci-UsticIsohumosols (Chernozems)
LinXi	2.2	19.9	370	928	43.44	120.08	-23.64	Temperate typical steppe	<i>Stipa</i> and <i>Aneuralepidium</i>	TypicCalci-UsticIsohumosols (Chernozems)
LinXi	2.2	19.9	370	928	43.44	120.08	-24.07	Temperate typical steppe	<i>Stipa</i> and <i>Aneuralepidium</i>	TypicCalci-UsticIsohumosols (Chernozems)
LinXi	2.2	19.9	370	928	43.44	120.08	-22.51	Temperate typical steppe	<i>Stipa</i> and <i>Aneuralepidium</i>	TypicCalci-UsticIsohumosols (Chernozems)
ZhaLuTeQi	2.8	22.4	387	332	44.61	120.97	-22.8	Temperate meadow steppe	<i>Stipa</i> , <i>Aneuralepidium</i> and <i>Filifolium</i>	Pachi-UsticIsohumosols (Chernozems)
ZhaLuTeQi	2.8	22.4	387	332	44.61	120.97	-22	Temperate meadow steppe	<i>Stipa</i> , <i>Aneuralepidium</i> and <i>Filifolium</i>	Pachi-UsticIsohumosols (Chernozems)
ZhaLuTeQi	2.8	22.4	387	332	44.61	120.97	-21.98	Temperate meadow steppe	<i>Stipa</i> , <i>Aneuralepidium</i> and <i>Filifolium</i>	Pachi-UsticIsohumosols (Chernozems)
WuLanHaoTe	4.1	20.8	416	366	46.05	121.79	-22.5	Temperate meadow steppe	<i>Stipa</i> , <i>Aneuralepidium</i> and <i>Filifolium</i>	Pachi-UsticIsohumosols (Chernozems)
WuLanHaoTe	4.1	20.8	416	366	46.05	121.79	-21.84	Temperate meadow steppe	<i>Stipa</i> , <i>Aneuralepidium</i> and <i>Filifolium</i>	Pachi-UsticIsohumosols (Chernozems)
WuLanHaoTe	4.1	20.8	416	366	46.05	121.79	-22.65	Temperate meadow steppe	<i>Stipa</i> , <i>Aneuralepidium</i> and <i>Filifolium</i>	Pachi-UsticIsohumosols (Chernozems)
AErShan	-2.7	15	391	1240	47.1	119.89	-23.29	Frigid temperate coniferous forest	<i>Larixgmelinii</i> and <i>Betulaplatyphylla</i> Suk	Umbri-GelicCambosols (Umbrisols)
AErShan	-2.7	15	391	1240	47.1	119.89	-24.85	Frigid temperate coniferous forest	<i>Larixgmelinii</i> and <i>Betulaplatyphylla</i> Suk	Umbri-GelicCambosols (Umbrisols)
AErShan	-2.7	15	391	1240	47.1	119.89	-25.64	Frigid temperate coniferous forest	<i>Larixgmelinii</i> and <i>Betulaplatyphylla</i> Suk	Umbri-GelicCambosols (Umbrisols)
YaKeShi	-2.9	18.5	379	634	49.33	120.97	-23.82	Frigid temperate coniferous forest	<i>Larixgmelinii</i>	Umbri-GelicCambosols (Umbrisols)
YaKeShi	-2.9	18.5	379	634	49.33	120.97	-24.55	Frigid temperate coniferous forest	<i>Larixgmelinii</i>	Umbri-GelicCambosols (Umbrisols)
YaKeShi	-2.9	18.5	379	634	49.33	120.97	-22.74	Frigid temperate coniferous forest	<i>Larixgmelinii</i>	Umbri-GelicCambosols (Umbrisols)

KuDuEr	-5.5	17.3	402	829	49.94	121.43	-26.08	Frigid temperate coniferous forest	<i>Larixgmelinii</i> and <i>Betulaplatyphylla Suk</i>	Umbri-GelicCambosols (Umbrisols)
KuDuEr	-5.5	17.3	402	829	49.94	121.43	-21.96	Frigid temperate coniferous forest	<i>Larixgmelinii</i> and <i>Betulaplatyphylla Suk</i>	Umbri-GelicCambosols (Umbrisols)
KuDuEr	-5.5	17.3	402	829	49.94	121.43	-23.91	Frigid temperate coniferous forest	<i>Larixgmelinii</i> and <i>Betulaplatyphylla Suk</i>	Umbri-GelicCambosols (Umbrisols)
GenHe	-5.3	17.9	424	718	50.46	121.31	-26	Frigid temperate coniferous forest	<i>Betulaplatyphylla Suk</i>	Umbri-GelicCambosols (Umbrisols)
GenHe	-5.3	17.9	424	718	50.46	121.31	-26.2	Frigid temperate coniferous forest	<i>Betulaplatyphylla Suk</i>	Umbri-GelicCambosols (Umbrisols)
BeiJicun	-5.5	18.4	450.8	603	53.29	122.15	-25.67	Frigid temperate coniferous forest	<i>Larixgmelinii</i> and <i>Pinussylvestrisvar</i>	Umbri-GelicCambosols (Umbrisols)
BeiJicun	-5.5	18.4	450.8	603	53.29	122.15	-25.16	Frigid temperate coniferous forest	<i>Larixgmelinii</i> and <i>Pinussylvestrisvar</i>	Umbri-GelicCambosols (Umbrisols)
BeiJicun	-5.5	18.4	450.8	603	53.29	122.15	-21.79	Frigid temperate coniferous forest	<i>Larixgmelinii</i> and <i>Pinussylvestrisvar</i>	Umbri-GelicCambosols (Umbrisols)