

Table S1: $\delta^{13}\text{C}$ of fatty acids in milk from different geographical location in Slovenia during summer/winter in 2013 and 2014.

FA ($\delta^{13}\text{C}$ ‰)	Year	Season	ALPINE Mean \pm SD	DINARIC	PANNONIAN	MEDITERRANEAN
C10:0	2013	summer	-26.7 \pm 1.4	-27.3 \pm 1.1	-24.3 \pm 1.8	-28.6 \pm 2.1
	2013	winter	-22.7 \pm 1.4	-22.7 \pm 1.5	-21.1 \pm 0.7	-24.1 \pm 2.3
	2013	average	-24.5 \pm 2.4	-24.3 \pm 2.5	-22.4 \pm 2.0	-26.3 \pm 3.2
	2014	summer	-24.4 \pm 1.3	-23.6 \pm 1.9	-22.7 \pm 1.6	-26.5 \pm 0.7
	2014	winter	-20.5 \pm 1.6	-19.9 \pm 1.5	-19.7 \pm 1.0	-25.6 \pm 0.8
	2014	average	-22.5 \pm 2.5	-21.6 \pm 2.5	-21.3 \pm 2.0	-26.1 \pm 1.0
C12:0	2013	summer	-28.0 \pm 1.3	-28.5 \pm 1.1	-25.5 \pm 1.7	-30.2 \pm 2.0
	2013	winter	-23.2 \pm 1.3	-22.9 \pm 1.7	-20.9 \pm 0.9	-25.1 \pm 2.9
	2013	average	-25.4 \pm 2.7	-24.9 \pm 3.0	-22.8 \pm 2.6	-27.6 \pm 3.6
	2014	summer	-25.3 \pm 1.3	-24.5 \pm 1.9	-23.1 \pm 0.9	-27.5 \pm 0.9
	2014	winter	-21.1 \pm 1.7	-20.8 \pm 1.8	-20.4 \pm 1.1	-26.8 \pm 0.8
	2014	average	-23.2 \pm 2.6	-22.5 \pm 2.6	-21.8 \pm 1.7	-27.2 \pm 1.0
C14:1	2013	summer	-29.2 \pm 2.5	-30.9 \pm 2.7	-28.1 \pm 3.8	-32.8 \pm 2.9
	2013	winter	-26.0 \pm 1.7	-26.6 \pm 1.7	-24.7 \pm 0.9	-27.9 \pm 2.5
	2013	average	-27.4 \pm 2.6	-28.1 \pm 2.9	-26.1 \pm 3.0	-30.4 \pm 3.7
	2014	summer	-27.7 \pm 1.4	-26.7 \pm 2.9	-25.9 \pm 1.6	-30.1 \pm 1.1
	2014	winter	-22.5 \pm 1.8	-22.2 \pm 1.1	-22.3 \pm 1.8	-27.9 \pm 1.1
	2014	average	-25.1 \pm 3.1	-24.4 \pm 3.1	-24.2 \pm 2.4	-29.0 \pm 1.7
C14:0	2013	summer	-26.1 \pm 2.5	-26.6 \pm 2.1	-23.7 \pm 1.6	-29.8 \pm 2.4
	2013	winter	-22.4 \pm 1.3	-21.9 \pm 1.7	-20.7 \pm 1.3	-23.7 \pm 3.0
	2013	average	-24.2 \pm 2.7	-23.6 \pm 2.9	-22.0 \pm 2.0	-26.8 \pm 4.1
	2014	summer	-23.7 \pm 1.1	-23.3 \pm 1.8	-22.5 \pm 2.9	-25.8 \pm 0.7
	2014	winter	-20.9 \pm 1.8	-19.6 \pm 1.4	-19.9 \pm 0.8	-25.7 \pm 0.8
	2014	average	-22.3 \pm 2.1	-21.3 \pm 2.4	-21.3 \pm 2.5	-25.7 \pm 0.8
C15:0	2013	summer	-35.1 \pm 2.2	-36.1 \pm 2.7	-33.4 \pm 3.7	-38.0 \pm 3.0
	2013	winter	-30.1 \pm 1.5	-30.7 \pm 2.0	-28.6 \pm 1.0	-31.9 \pm 2.0
	2013	average	-32.7 \pm 3.1	-32.8 \pm 3.4	-30.6 \pm 3.5	-34.9 \pm 4.0
	2014	summer	-31.6 \pm 1.2	-30.9 \pm 2.1	-29.7 \pm 2	-33.1 \pm 1.0
	2014	winter	-26.7 \pm 2.1	-25.8 \pm 1.2	-26.2 \pm 1.4	-31.8 \pm 0.8
	2014	average	-29.2 \pm 3.1	-28.2 \pm 3.1	-28.2 \pm 2.5	-32.4 \pm 1.2
C16:1	2013	summer	-31.0 \pm 1.9	-32.0 \pm 2.7	-30.1 \pm 3.6	-35.0 \pm 3.8
	2013	winter	-27.0 \pm 1.4	-27.4 \pm 1.7	-25.0 \pm 0.9	-28.6 \pm 2.7
	2013	average	-28.8 \pm 2.6	-29.0 \pm 3.0	-27.1 \pm 3.5	-31.8 \pm 4.6
	2014	summer	-29.5 \pm 1.7	-28.2 \pm 2.0	-26.3 \pm 1.7	-31.0 \pm 2.0
	2014	winter	-23.6 \pm 1.7	-23.3 \pm 1.3	-23.5 \pm 0.9	-29.1 \pm 0.8
	2014	average	-26.6 \pm 3.5	-25.6 \pm 3.0	-25.0 \pm 1.9	-30.0 \pm 2.0
C16:0	2013	summer	-27.3 \pm 1.9	-27.4 \pm 0.9	-22.5 \pm 1.7	-28.2 \pm 2.4
	2013	winter	-22.9 \pm 1.1	-22.5 \pm 1.8	-21.0 \pm 1.0	-22.5 \pm 2.7
	2013	average	-24.8 \pm 2.6	-24.2 \pm 2.8	-21.6 \pm 1.5	-25.3 \pm 3.8
	2014	summer	-24.7 \pm 1.6	-23.7 \pm 2.1	-22.4 \pm 1.3	-27.0 \pm 1.2
	2014	winter	-22.0 \pm 1.8	-20.8 \pm 2.0	-20.3 \pm 1.2	-26.7 \pm 0.5
	2014	average	-23.4 \pm 2.2	-22.1 \pm 2.5	-21.4 \pm 1.6	-26.8 \pm 1.1
C18:1 ω 9c	2013	summer	-29.8 \pm 1.8	-29.7 \pm 2.3	-26.3 \pm 1.5	-32.1 \pm 2.7
	2013	winter	-27.3 \pm 1.5	-26.2 \pm 1.4	-25.1 \pm 1.0	-26.4 \pm 1.5
	2013	average	-28.4 \pm 2.1	-27.4 \pm 2.4	-25.6 \pm 1.3	-29.8 \pm 3.7
	2014	summer	-27.3 \pm 1.3	-26.7 \pm 1.0	-25.3 \pm 1.4	-28.9 \pm 1.5
	2014	winter	-25.6 \pm 1.7	-24.6 \pm 1.8	-23.9 \pm 1.1	-31.1 \pm 2.3
	2014	average	-26.4 \pm 1.8	-25.6 \pm 1.8	-24.7 \pm 1.4	-30.0 \pm 2.4
C18:0	2013	summer	-30.8 \pm 2.7	-30.9 \pm 2.8	-28.4 \pm 1.1	-33.8 \pm 3.1
	2013	winter	-26.8 \pm 1.9	-26.6 \pm 1.7	-24.8 \pm 1.3	-26.8 \pm 2.8
	2013	average	-28.6 \pm 3.0	-28.1 \pm 3.0	-26.3 \pm 2.1	-30.3 \pm 4.6

	Year	Season	ALPINE	DINARIC	PANNONIAN	MEDITERRANEAN
FA ($\delta^{13}\text{C}$ ‰)			Mean \pm SD			
	2014	summer	-28.5 \pm 1.3	-28.1 \pm 1.4	-27.0 \pm 1.7	-31.7 \pm 3.9
	2014	winter	-25.5 \pm 2.0	-25.0 \pm 2.7	-23.8 \pm 0.9	-30.6 \pm 1.8
	2014	average	-27.0 \pm 2.3	-26.5 \pm 2.7	-25.5 \pm 2.1	-31.2 \pm 3.4
	2013	summer	-22.9 \pm 1.0	-23.3 \pm 1.7	-20.7 \pm 1.0	-24.9 \pm 1.9
	2013	winter	-21.2 \pm 1.1	-21 \pm 1.5	-19.6 \pm 0.6	-22.9 \pm 2.2
Bulk	2013	average	-21.9 \pm 1.4	-21.8 \pm 1.9	-20.1 \pm 1.0	-23.9 \pm 2.3
	2014	summer	-23.7 \pm 1.3	-22.4 \pm 1.7	-21.2 \pm 1.1	-25.2 \pm 1.5
	2014	winter	-20.8 \pm 1.5	-20.2 \pm 0.9	-19.2 \pm 0.9	-24.9 \pm 1.2
	2014	average	-22.3 \pm 2.0	-21.3 \pm 1.7	-20.2 \pm 1.4	-25.1 \pm 1.5

Table S2: Geographical information of the sampling location

Sample location	Geographical origin	Latitude	Longitude	Distance near the coast (~m)	Altitude (~m.a.s.l.)
Brkini	Mediterranean	45°34'17.8"N	14°02'35.8"E	20,000	588
Kozina	Mediterranean	45°36'30.0"N	13°55'43.9"E	11,000	493
Sežana	Mediterranean	45°42'09.1"N	13°51'06.5"E	10,000	360
Maribor	Pannonian	46°32'50.5"N	15°38'42.8"E	176,000	162
Korena	Pannonian	46°31'27.1"N	15°46'20.1"E	188,000	350
Ptuj	Pannonian	46°25'18.3"N	15°52'05.4"E	186,000	232
Rogaška	Pannonian	46°14'09.8"N	15°38'08.9"E	159,000	224
Konjice	Pannonian	46°20'16.1"N	15°25'23.6"E	152,000	322
Šentilj	Pannonian	46°40'57.5"N	15°43'29.6"E	190,000	292
Zahodno Goričko	Pannonian	46°49'27.6"N	16°05'09.1"E	222,000	270
Ljutomer	Pannonian	46°32'09.9"N	16°11'54.8"E	214,000	175
Murska Sobota	Pannonian	46°39'29.4"N	16°09'47.5"E	218,000	189
Radenci	Pannonian	46°38'35.2"N	16°02'20.1"E	209,000	202
Ormož	Pannonian	46°25'10.7"N	16°08'46.2"E	203,000	218
Vzhodno Goričko	Pannonian	46°49'57.4"N	16°17'04.8"E	235,000	242
Gornja Radgona	Pannonian	46°40'38.7"N	15°59'23.5"E	207,000	206
Ponikva	Pannonian	46°15'14.1"N	15°26'32.4"E	147,000	183
Slovenj Gradec	Pannonian	46°30'28.0"N	15°04'37.2"E	138,000	262
Šmarje	Pannonian	46°14'08.6"N	15°31'30.9"E	153,000	592
Bistrica	Pannonian	46°23'20.5"N	15°34'07.4"E	127,000	201
Bohinj	Alpine	46°17'36.4"N	13°54'40.5"E	64,000	308
Kobarid	Alpine	46°14'52.7"N	13°34'43.9"E	53,000	235
Tolmin	Alpine	46°11'08.9"N	13°43'52.5"E	48,000	600
Kamnik	Alpine	46°13'01.5"N	14°37'04.8"E	91,000	340
Ribnica na Pohorju	Alpine	46°32'09.1"N	15°16'05.5"E	153,000	276
Mozirje	Alpine	46°20'21.3"N	14°57'40.5"E	121,000	449
Savinjska	Alpine	46°15'57.3"N	15°07'13.4"E	127,000	338
Vitanje	Alpine	46°22'48.7"N	15°17'41.8"E	144,000	322
Prevalje	Alpine	46°32'56.5"N	14°55'19.1"E	134,000	413
Vrh	Alpine	46°34'30.5"N	15°02'05.0"E	141,000	346
Dravograd	Alpine	46°35'23.5"N	15°01'21.8"E	141,000	390
Vuzenica	Alpine	46°35'53.8"N	15°09'54.4"E	150,000	365
Polzela	Alpine	46°16'50.4"N	15°04'29.9"E	124,000	292
Zavodnje	Alpine	46°25'29.8"N	15°01'02.9"E	129,000	642
Škale	Alpine	46°23'28.1"N	15°05'29.9"E	132,000	234
Planina	Alpine	46°06'17.2"N	15°24'17.4"E	140,000	275
Braslovče	Alpine	46°17'18.8"N	15°02'20.8"E	123,000	456
Vinica	Dinaric	45°27'41.5"N	15°15'12.6"E	60,000	561
Velike Lašče	Dinaric	45°50'05.3"N	14°38'18.6"E	62,000	307
Kamenje	Dinaric	45°51'08.3"N	15°08'58.5"E	82,000	184
Logatec	Dinaric	45°55'01.6"N	14°13'32.7"E	48,000	526
Žužemberk	Dinaric	45°49'53.4"N	14°55'41.3"E	70,000	387
Podpeč	Dinaric	45°58'22.9"N	14°24'56.5"E	62,000	476
Postojna	Dinaric	45°46'29.4"N	14°12'55.7"E	39,000	209
Brežice	Dinaric	45°55'17.1"N	15°35'50.1"E	149,000	292
Sevnica	Dinaric	46°00'42.5"N	15°18'32.5"E	126,000	556