

The influence of plant species and pretreatment on the ^{14}C age of *Carex*-dominated peat plants of a peat core from Jinchuan Mire, NE China

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Supplement materials

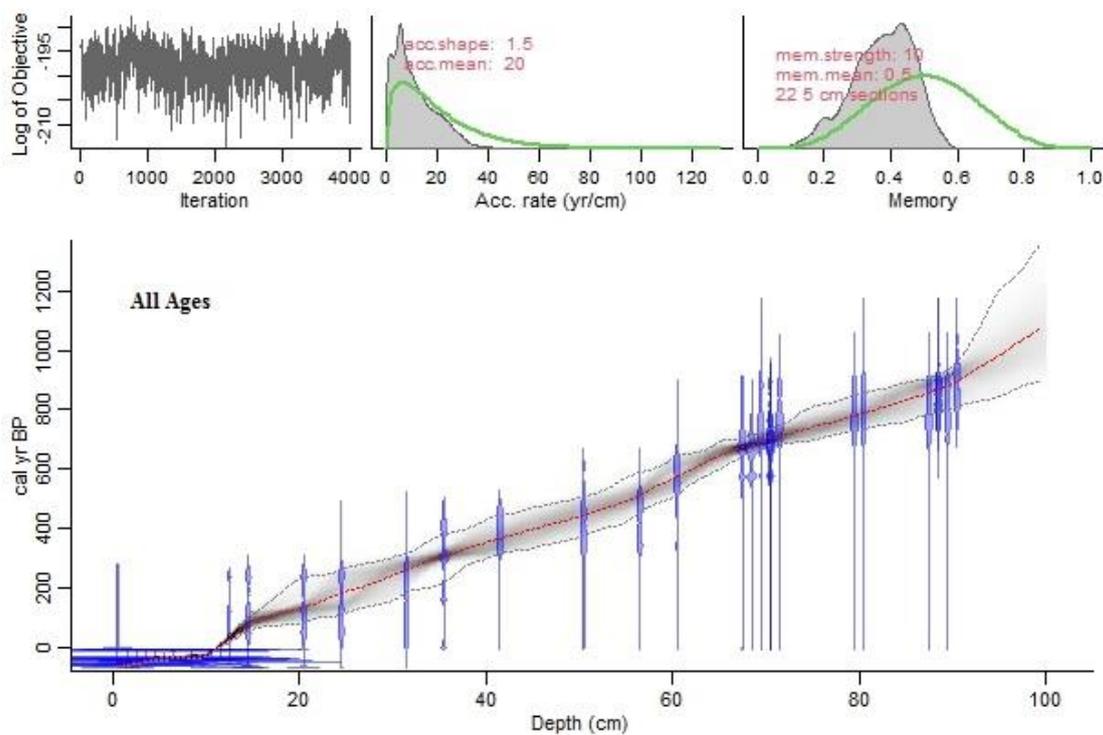


Fig. S1: The results of Bacon age models of JCA core by using the ^{14}C ages of the selected A-treated samples marked in Table S1.

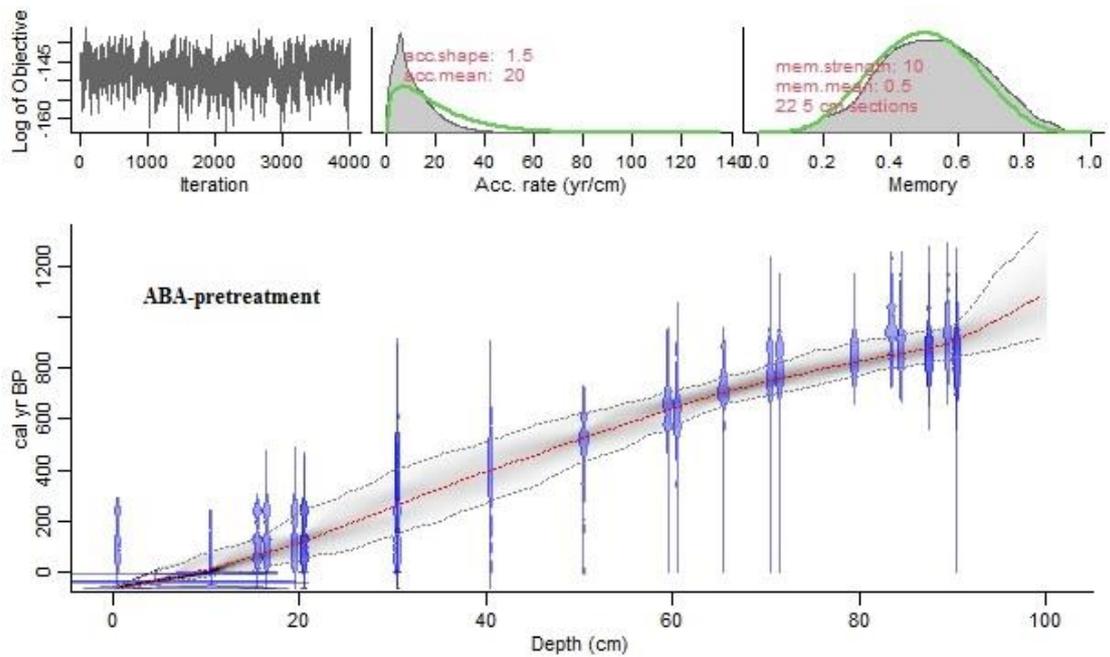


Fig. S2: The results of Bacon age models of JCA core by using the ^{14}C ages of the selected ABA-treated samples marked in Table S1.

Table S1 All AMS ^{14}C dates from JCA core. Lab code of NTUAMS- and Sample ID with AGER indicate graphite in the NTUAMS Lab but measured by the OUC-CAMS Lab. Lab code of 1032.1 and Sample ID with OUC are the measurements in COU AMS Lab. C = bulk *Carex*; L = *Carex* leaves; R = *Carex* roots; A = acid-treated; ABA = acid-base-acid treated. pMC (percentage of modern carbon) = $(^{14}\text{C}/^{12}\text{C})_{\text{sample}} / (^{14}\text{C}/^{12}\text{C})_{\text{atm CO}_2}$ at 1950 $\times 100$. ^{14}C age (BP-before present, the present is 1950 CE) = $-8033 \ln(\text{pMC}/100)$.

Lab code	Sample ID	Depth (cm)	Type	Pretreatment	pMC (%)	1 σ error	^{14}C age (BP)	1 σ error	IntCal20 Calib age (cal BP)	2 σ error	Selected A-treat for Bacon model	Selected ABA-treat for Bacon model
NTUAMS-4320	JC-A-1 0-1	0.5	bulk plant	A	102.368	1.019	-183	79	modern		Y	
NTUAMS-4321	JC-A-2 0-1	0.5	bulk plant	ABA	101.480	0.922	-112	71	modern			Y
NTUAMS-5569	JCA-1-C-A	0.5	Carex	A	104.261	0.799	-335	62	modern			
NTUAMS-4446	JC-A-1 1-2	1.5	bulk plant	A	105.368	1.036	-407	76	modern		Y	
NTUAMS-5570	JCA-2-C-A	1.5	Carex	A	103.928	0.754	-310	58	modern			
NTUAMS-4448	JC-A-1 2-3	2.5	bulk plant	A	105.564	0.933	-422	69	modern		Y	
NTUAMS-5590	JCA-3-C-A AGER	2.5	Carex	A	108.447	0.797	-651	59	modern			
NTUAMS-5571	JCA-3-C-A	2.5	Carex	A	107.927	0.818	-613	61	modern			
NTUAMS-4450	JC-A-1 3-4	3.5	bulk plant	A	109.950	1.150	-744	88	modern		Y	
NTUAMS-5591	JCA-4-C-A AGER	3.5	Carex	A	102.261	0.769	-180	60	modern			
NTUAMS-5572	JCA-4-C-A	3.5	Carex	A	104.781	0.770	-375	59	modern			
NTUAMS-4434	JC-A-1 4-5	4.5	bulk plant	A	115.593	0.921	-1137	63	modern		Y	
NTUAMS-4435	JC-A-2 4-5	4.5	bulk plant	ABA	114.704	1.114	-1074	77	modern			Y
NTUAMS-5592	JCA-5-C-A AGER	4.5	Carex	A	107.288	0.825	-565	62	modern			
NTUAMS-5573	JCA-5-C-A	4.5	Carex	A	106.603	1.063	-514	80	modern			
NTUAMS-4312	JC-A-1 5-6	5.5	bulk plant	A	111.633	0.987	-860	72	modern			
NTUAMS-5574	JCA-6-C-A	5.5	Carex	A	121.682	0.948	-1576	63	modern		Y	
NTUAMS-4311	JC-A-1 6-7	6.5	bulk plant	A	116.837	1.091	-1220	76	modern		Y	
NTUAMS-5575	JCA-7-C-A	6.5	Carex	A	113.030	0.961	-984	68	modern			
NTUAMS-4449	JC-A-1 7-8	7.5	bulk plant	A	112.512	0.980	-925	72	modern			
NTUAMS-5593	JCA-8-C-A AGER	7.5	Carex	A	109.714	0.816	-745	60	modern			
NTUAMS-5576	JCA-8-C-A	7.5	Carex	A	111.541	0.894	-877	64	modern			
NTUAMS-4361	JC-A-1 8-9	8.5	bulk plant	A	106.621	1.062	-506	83	modern			
NTUAMS-5577	JCA-9-C-A	8.5	Carex	A	113.473	0.912	-1015	65	modern		Y	
NTUAMS-4436	JC-A-1 9-10	9.5	bulk plant	A	107.755	0.885	-588	67	modern			
NTUAMS-4437	JC-A-2 9-10	9.5	bulk plant	ABA	103.393	1.043	-261	78	modern			
NTUAMS-5578	JCA-10-C-A	9.5	Carex	A	99.657	0.683	28	55	modern			

NTUAMS-4340	JC-A-1 10-11	10.5	bulk plant	A	103.470	1.069	-269	85	modern			
NTUAMS-4341	JC-A-2 10-11	10.5	bulk plant	ABA	104.922	0.862	-377	69	modern			Y
NTUAMS-4628	JC-A-S-1 10-11	10.5	sed.	A	103.110	0.783	-237	62	modern			
NTUAMS-4629b	JC-A-S-2 10-11	10.5	sed.	ABA	101.278	0.769	-96	64	modern			
NTUAMS-5594	JCA-11-C-A AGER	10.5	Carex	A	100.284	0.772	-23	62	modern			
NTUAMS-6136	JCA-11-C-ABA	10.5	Carex	ABA	98.678	0.779	107	63	225	55		
NTUAMS-4475	JC-A-1 11-12	11.5	bulk plant	A	106.608	1.088	-498	83	modern			
NTUAMS-5579	JCA-12-C-A	11.5	Carex	A	109.177	0.692	-705	51	modern		Y	
NTUAMS-4313	JC-A-1 12-13	12.5	bulk plant	A	102.559	0.983	-198	78	modern		Y	
NTUAMS-6188	JCA-13-C-A	12.5	Carex	A	99.217	0.821	63	67	modern			
NTUAMS-6347	JCA-13-C-ABA	12.5	Carex	ABA	97.199	0.702	228	58	405	45		
NTUAMS-4529	JC-A-1 13-14	13.5	bulk plant	A	100.737	0.953	-56	80	modern			
NTUAMS-6189	JCA-14-C-A	13.5	Carex	A	98.788	0.697	98	57	235	50		
NTUAMS-6348	JCA-14-C-ABA	13.5	Carex	ABA	96.765	1.044	264	87	375	125		
NTUAMS-4440	JC-A-1 14-15	14.5	bulk plant	A	101.152	1.033	-88	79	modern		Y	
NTUAMS-5595	JCA-15-C-A AGER	14.5	Carex	A	98.143	0.825	151	68	145	145		
NTUAMS-5582	JCA-16-C-A	15.5	Carex	A	99.248	0.629	61	51	modern			
NTUAMS-8855	JCA-16-C-ABA-L	15.5	Carex leave	ABA	98.664	0.812	108	66	80	75		
NTUAMS-8844	JCA-16-C-ABA-R	15.5	Carex root	ABA	100.348	0.766	-28	61	modern		Y	
NTUAMS-4531	JC-A-1 16-17	16.5	bulk plant	A	98.923	0.936	81	73	modern			
NTUAMS-5583	JCA-17-C-A	16.5	Carex	A	99.679	0.610	26	49	modern			
NTUAMS-8845	JCA-17-C-ABA-L	16.5	Carex leave	ABA	97.397	0.716	212	59	280	45		
NTUAMS-8856	JCA-17-C-ABA-R	16.5	Carex root	ABA	99.380	0.876	50	71	modern		Y	
NTUAMS-4532	JC-A-1 17-18	17.5	bulk plant	A	97.117	0.919	228	74	405	55		
NTUAMS-5747	JCA-18-C-A	17.5	Carex	A	97.295	0.856	220	71	190	140		
NTUAMS-8846	JCA-18-C-ABA-L	17.5	Carex leave	ABA	96.748	1.029	266	85	375	125		
NTUAMS-8847	JCA-18-C-ABA-R	17.5	Carex root	ABA	97.900	0.728	170	60	210	90		
NTUAMS-4533	JC-A-1 18-19	18.5	bulk plant	A	97.857	0.901	170	74	160	160		
NTUAMS-6190	JCA-19-C-A	18.5	Carex	A	98.214	0.818	145	67	80	80		
NTUAMS-4452	JC-A-1 19-20	19.5	bulk plant	A	99.367	1.076	48	89	modern			
NTUAMS-4453	JC-A-2 19-20	19.5	bulk plant	ABA	96.023	0.897	320	75	395	125		
NTUAMS-5748	JCA-20-C-A	19.5	Carex	A	98.888	0.712	90	58	modern			
NTUAMS-8848	JCA-20-C-ABA-R	19.5	Carex root	ABA	98.653	0.733	109	60	230	55		
NTUAMS-4347	JC-A-1 20-21	20.5	bulk plant	A	100.838	0.854	-64	72	modern		Y	
NTUAMS-4348	JC-A-2 20-21	20.5	bulk plant	ABA	99.281	0.816	56	65	modern			Y
NTUAMS-4348	JC-A-2 20-21	20.5	bulk plant	ABA	99.565	0.892	32	73	modern			Y
NTUAMS-4630b	JC-A-S-1 20-21	20.5	sed.	A	97.565	0.838	195	66	160	160		
NTUAMS-4631	JC-A-S-2 20-21	20.5	sed.	ABA	97.699	0.791	179	66	160	160		
1032.1.7	JCA-21-C-A OUC	20.5	Carex	A	98.454	0.477	125	38	80	75		
NTUAMS-6137	JCA-21-C-ABA	20.5	Carex	ABA	97.122	0.784	235	65	405	60		
NTUAMS-5749	JCA-22-C-A	21.5	Carex	A	97.948	0.852	167	70	155	155		
1032.1.6	JCA-23-C-A OUC	22.5	Carex	A	97.199	0.497	228	40	405	30		
NTUAMS-6191	JCA-24-C-A	23.5	Carex	A	97.520	0.913	202	75	165	165		
NTUAMS-6349	JCA-24-C-ABA	23.5	Carex	ABA	95.413	0.665	377	56	410	100		
NTUAMS-4442	JC-A-1 24-25	24.5	bulk plant	A	99.281	0.952	56	73	modern		Y	
NTUAMS-4443	JC-A-2 24-25	24.5	bulk plant	ABA	95.119	0.888	395	76	425	120		
NTUAMS-5750	JCA-25-C-A	24.5	Carex	A	98.287	0.834	139	68	80	80		
NTUAMS-6117	JCA-26-C-A	25.5	Carex	A	95.012	0.950	411	80	425	130		
NTUAMS-6138	JCA-27-C-A	26.5	Carex	A	93.152	0.888	570	77	585	85		
NTUAMS-6118	JCA-28-C-A	27.5	Carex	A	95.592	0.914	362	77	410	125		
NTUAMS-4444	JC-A-1 29-30	29.5	bulk plant	A	96.143	0.862	311	75	390	125		
NTUAMS-6120	JCA-30-C-A	29.5	Carex	A	95.484	0.968	371	81	415	130		
NTUAMS-8857	JCA-30-C-ABA-R	29.5	Carex root	ABA	95.944	0.854	333	71	400	120		
NTUAMS-8858	JCA-30-C-ABA-L	29.5	Carex leave	ABA	95.530	0.848	367	71	410	115		
NTUAMS-4349	JC-A-1 30-31	30.5	bulk plant	A	96.286	0.815	295	67	385	120		
NTUAMS-4350	JC-A-2 30-31	30.5	bulk plant	ABA	96.226	0.886	303	75	390	125		
NTUAMS-8859	JCA-31-C-ABA-L	30.5	Carex leave	ABA	98.292	0.777	138	63	80	80		Y
NTUAMS-8860	JCA-31-C-ABA-R	30.5	Carex root	ABA	96.618	0.727	276	60	380	115		
NTUAMS-4310	JC-A-1 31-32	31.5	bulk plant	A	98.065	0.916	154	74	150	150	Y	
NTUAMS-6192	JCA-32-C-A	31.5	Carex	A	95.362	0.795	382	67	415	110		
NTUAMS-6350	JCA-32-C-ABA	31.5	Carex	ABA	95.193	0.637	396	54	470	50		
NTUAMS-6139	JCA-33-C-A	32.5	Carex	A	96.497	0.923	286	77	380	125		
NTUAMS-6140	JCA-34-C-A	33.5	Carex	A	91.995	1.091	670	95	630	120		
1032.1.5	JCA-36-C-A OUC	35.5	Carex	A	96.733	0.483	267	39	405	55	Y?	
NTUAMS-6142	JCA-36-C-ABA	35.5	Carex	ABA	93.300	0.924	557	80	575	100		
NTUAMS-6143	JCA-37-C-A	36.5	Carex	A	94.424	1.027	461	87	440	125		
NTUAMS-6144	JCA-38-C-A	37.5	Carex	A	93.948	1.088	502	93	545	120		
NTUAMS-6145	JCA-39-C-A	38.5	Carex	A	94.140	0.919	485	78	615	35		
NTUAMS-5751	JCA-40-C-A	39.5	Carex	A	94.202	0.813	480	69	615	30		
NTUAMS-8861	JCA-40-C-ABA-R	39.5	Carex root	ABA	94.232	0.739	477	63	615	30		
NTUAMS-4351	JC-A-1 40-41	40.5	bulk plant	A	94.811	0.755	420	68	480	65		
NTUAMS-4352	JC-A-2 40-41	40.5	bulk plant	ABA	96.478	0.901	278	75	380	125		Y
NTUAMS-6146	JCA-41-C-A	40.5	Carex	A	95.431	0.993	376	84	415	135		
1032.1.4	JCA-42-C-A OUC	41.5	Carex	A	95.874	0.440	338	35	395	85	Y	
NTUAMS-6147	JCA-42-C-ABA	41.5	Carex	ABA	93.872	0.880	508	75	545	115		
1032.1.3	JCA-43-C-A OUC	42.5	Carex	A	94.744	0.469	434	38	485	55		
NTUAMS-6148	JCA-43-C-ABA	42.5	Carex	ABA	93.987	0.808	498	69	615	40		
1032.1.2	JCA-44-C-A OUC	43.5	Carex	A	94.810	0.447	428	36	480	50		
NTUAMS-6149	JCA-44-C-ABA	43.5	Carex	ABA	94.177	0.852	482	73	615	35		
NTUAMS-5743	JCA-45-C-A	44.5	Carex	A	93.864	0.801	509	69	550	105		
1032.1.1	JCA-46-C-A OUC	45.5	Carex	A	94.123	0.459	487	37	525	35		
NTUAMS-5744	JCA-47-C-A	46.5	Carex	A	94.353	0.814	467	69	495	70		
NTUAMS-5745	JCA-48-C-A	47.5	Carex	A	90.340	0.793	816	71	745	90		
NTUAMS-5746	JCA-49-C-A	48.5	Carex	A	92.653	0.803	613	70	600	75		

NTUAMS-5509	JCA-50-C-A	49.5	Carex	A	92.270	0.788	646	69	605	80		
NTUAMS-8862	JCA-50-C-ABA-R	49.5	Carex root	ABA	92.276	0.703	646	61	610	70		
NTUAMS-4353	JC-A-1 50-51	50.5	bulk plant	A	94.047	0.866	480	77	615	35	Y	
NTUAMS-4353	JC-A-1 50-51	50.5	bulk plant	A	95.737	0.882	345	75	405	125		
NTUAMS-4354	JC-A-2 50-51	50.5	bulk plant	ABA	94.399	0.905	454	77	490	75		Y
NTUAMS-5741	JCA-51-C-A	50.5	Carex	A	92.073	0.876	663	76	615	85		
NTUAMS-6150	JCA-52-C-A	51.5	Carex	A	92.329	0.834	641	73	605	85		
NTUAMS-5742	JCA-53-C-A	52.5	Carex	A	92.999	0.794	583	69	590	80		
NTUAMS-6151	JCA-53-C-ABA	52.5	Carex	ABA	92.680	0.824	611	71	600	75		
NTUAMS-6122	JCA-54-C-A	53.5	Carex	A	92.661	0.938	612	81	595	90		
NTUAMS-5510	JCA-55-C-A	54.5	Carex	A	91.935	0.818	675	71	625	80		
NTUAMS-5511	JCA-56-C-A	55.5	Carex	A	93.353	0.819	553	70	580	85		
NTUAMS-5701	JCA-57-C-A	56.5	Carex	A	95.075	0.769	406	65	420	110	Y	
NTUAMS-5700	JCA-58-C-A	57.5	Carex	A	91.886	0.553	680	48	655	35		
NTUAMS-5699	JCA-59-C-A	58.5	Carex	A	92.032	0.608	667	53	615	65		
NTUAMS-5554	JCA-60-C-A	59.5	Carex	A	92.037	0.686	667	60	615	75		
NTUAMS-8863	JCA-60-C-ABA-R	59.5	Carex root	ABA	92.229	0.695	650	61	610	70		Y
NTUAMS-4355	JC-A-1 60-61	60.5	bulk plant	A	93.092	0.904	566	78	585	90	Y	
NTUAMS-4356	JC-A-2 60-61	60.5	bulk plant	ABA	91.268	0.920	714	79	650	105		Y
NTUAMS-5512	JCA-61-C-A	60.5	Carex	A	91.119	0.852	747	75	675	125		
NTUAMS-5698	JCA-61-C-A	60.5	Carex	A	92.225	0.793	650	69	610	80		
NTUAMS-5555	JCA-62-C-A	61.5	Carex	A	91.649	0.700	700	61	675	55		
NTUAMS-6193	JCA-64-C-A	63.5	Carex	A	90.574	0.834	795	74	740	95		
NTUAMS-5556	JCA-65-C-A	64.5	Carex	A	89.154	0.671	922	60	830	105		
NTUAMS-5557	JCA-66-C-A	65.5	Carex	A	89.753	0.676	868	61	760	80		
NTUAMS-8864	JCA-66-C-ABA-R	65.5	Carex root	ABA	90.554	0.692	797	61	725	75		Y
NTUAMS-6155	JCA-67-C-A	66.5	Carex	A	88.113	0.918	1017	84	905	175		
NTUAMS-5697	JCA-68-C-A	67.5	Carex	A	91.243	0.563	736	50	685	55	Y	
NTUAMS-5696	JCA-69-C-A	68.5	Carex	A	91.511	0.563	713	49	680	50	Y	
NTUAMS-6156	JCA-70-C-A	69.5	Carex	A	90.155	0.851	833	76	790	125	Y?	
NTUAMS-4357	JC-A-1 70-71	70.5	bulk plant	A	90.634	0.745	766	62	715	85	Y	
NTUAMS-4357	JC-A-1 70-71	70.5	bulk plant	A	90.273	0.742	802	62	730	80	Y	
NTUAMS-4357	JC-A-1 70-71	70.5	bulk plant	A	91.143	0.772	722	70	650	100	Y	
NTUAMS-4358	JC-A-2 70-71	70.5	bulk plant	ABA	89.423	0.924	873	81	800	125		Y
NTUAMS-5621	JCA-72-C-A	71.5	Carex	A	89.949	0.610	851	55	755	80	Y	
NTUAMS-8865	JCA-72 (plant) ABA	71.5	plant	ABA	89.403	0.823	900	74	805	125		Y
NTUAMS-6158	JCA-73-C-A	72.5	Carex	A	83.751	0.835	1424	80	1300	125		
NTUAMS-6159	JCA-74-C-A	73.5	Carex	A	87.205	0.866	1100	80	1040	140		
NTUAMS-6160	JCA-75-C-A	74.5	Carex	A	87.597	1.003	1064	92	975	205		
NTUAMS-6161	JCA-76-C-A	75.5	Carex	A	88.379	0.812	992	74	870	140		
NTUAMS-6194	JCA-78-C-A	77.5	Carex	A	89.139	0.709	924	64	830	110		
NTUAMS-6351s	JCA-78-C-ABA	77.5	Carex	ABA	85.585	0.781	1250	73	1175	125		
NTUAMS-6163	JCA-79-C-A	78.5	Carex	A	87.615	0.791	1062	73	1015	115		
NTUAMS-6195	JCA-80-C-A	79.5	Carex	A	89.680	0.640	875	57	765	75	Y	
NTUAMS-6352	JCA-80-C-ABA	79.5	Carex	ABA	88.931	0.605	942	55	835	100		Y
NTUAMS-8867	JCA-80-C-ABA-R	79.5	Carex root	ABA	88.308	0.756	999	69	890	120		
NTUAMS-4359	JC-A-1 80-81	80.5	bulk plant	A	89.256	0.767	891	72	805	120	Y	
NTUAMS-4360	JC-A-2 80-81	80.5	bulk plant	ABA	86.672	0.820	1119	74	1045	135		
NTUAMS-5620	JCA-81-C-A	80.5	Carex	A	87.585	0.541	1065	50	990	85		
NTUAMS-5619	JCA-82-C-A	81.5	Carex	A	88.736	0.535	960	48	855	85		
NTUAMS-5618	JCA-83-C-A	82.5	Carex	A	87.933	0.512	1033	47	1040	20		
NTUAMS-5617	JCA-84-C-A	83.5	Carex	A	88.692	0.572	964	52	865	95		
NTUAMS-5617	JCA-84-C-ABA	83.5	Carex	ABA	87.770	0.526	1048	48	985	80		Y
NTUAMS-6196	JCA-85-C-A	84.5	Carex	A	88.835	0.647	951	59	840	105		
NTUAMS-6353	JCA-85-C-ABA	84.5	Carex	ABA	88.363	0.655	994	60	875	105		Y
NTUAMS-5615	JCA-86-C-A	85.5	Carex	A	89.199	0.603	918	54	830	100		
NTUAMS-4322	JC-A-1 87-88	87.5	bulk plant	A	88.317	0.847	972	73	865	135		
NTUAMS-4323	JC-A-2 87-88	87.5	bulk plant	ABA	88.350	0.759	972	73	865	135		Y
NTUAMS-6197	JCA-88-C-A	87.5	Carex	A	89.837	0.688	861	62	760	80	Y	
NTUAMS-6354	JCA-88-C-ABA	87.5	Carex	ABA	88.810	0.666	953	60	840	105		Y
NTUAMS-5613	JCA-89-C-A	88.5	Carex	A	89.002	0.566	936	51	830	100	Y	
NTUAMS-5613-1	JCA-89-C-A-1	88.5	Carex	A	89.068	0.636	930	57	830	100	Y	
NTUAMS-5612	JCA-90-C-A	89.5	Carex	A	89.548	0.618	887	55	820	100	Y	
NTUAMS-8868	JCA-90 (plant) ABA	89.5	plant	ABA	88.012	0.786	1026	72	925	150		Y
NTUAMS-5610	JCA-91-C-A	90.5	Carex	A	88.354	0.563	995	51	875	100	Y	
NTUAMS-8869	JCA-91-C-ABA-L	90.5	Carex leave	ABA	89.315	0.790	908	71	810	125		Y
NTUAMS-8870	JCA-91-C-ABA-R	90.5	Carex root	ABA	88.722	0.796	961	72	850	130		Y