

Supplementary material - Measured and calculated single values of individual containers

Table S1: Mean air temperature on the day of labeling, mean plant age at labeling (lab.) and harvest (har.) as well as the C amounts of the shoots, taproots and lateral roots ($> 300 \mu\text{m}$) 21 days after labeling for each container (Pot) in each of the three experiments (Exp.).

Pot no.	Exp. no.	Geno-type	Age at lab. [d]	Age at har. [d]	Air temperature [°C]	C amount of shoot [g]	C amount of tap-root [g]	C amount of lateral roots [g]
1	1	AVATAR	88	109	8.9	3.174	0.571	0.781
2	1	AVATAR	88	109	8.9	2.737	0.417	0.733
3	1	AVATAR	88	109	8.9	3.481	0.652	0.982
4	1	AVATAR	88	109	8.9	3.055	0.566	0.878
5	1	AVATAR	88	109	8.9	3.331	0.628	0.862
6	1	AVATAR	88	109	8.9	2.804	0.243	0.632
7	1	DH-1	88	109	8.9	2.491	0.567	0.984
8	1	DH-1	88	109	8.9	2.948	0.663	0.968
9	1	DH-1	88	109	8.9	2.922	0.643	1.075
10	1	DH-1	88	109	8.9	2.571	0.662	1.001
11	1	DH-1	88	109	8.9	2.683	0.553	0.975
12	1	DH-1	88	109	8.9	2.472	0.503	1.020
13	1	DH-2	88	109	8.9	2.380	0.375	0.877
14	1	DH-2	88	109	8.9	2.238	0.344	0.475
15	1	DH-2	88	109	8.9	2.334	0.353	0.490
16	1	DH-2	88	109	8.9	2.140	0.373	0.465
17	1	DH-2	88	109	8.9	2.262	0.420	0.893
18	1	DH-2	88	109	8.9	2.107	0.324	0.424
19	1	VISBY	88	109	8.9	3.121	0.521	1.061
20	1	VISBY	88	109	8.9	2.863	0.520	0.661
21	1	VISBY	88	109	8.9	3.370	0.519	1.462
22	1	VISBY	88	109	8.9	2.865	0.591	1.454
23	1	VISBY	88	109	8.9	3.014	0.714	1.200
24	1	VISBY	88	109	8.9	2.667	0.452	0.786
25	2	AVATAR	143	164	15.0	6.690	0.936	1.238
26	2	AVATAR	143	164	15.0	7.384	0.782	2.004
27	2	AVATAR	143	164	15.0	6.972	0.910	1.966
28	2	AVATAR	143	164	15.0	7.186	0.675	2.068
29	2	AVATAR	143	164	15.0	6.583	0.799	2.047
30	2	AVATAR	143	164	15.0	6.856	0.825	1.777
31	2	DH-1	143	164	15.0	6.282	1.074	2.198
32	2	DH-1	143	164	15.0	5.764	1.171	2.229

2 *What regulates the rhizodeposition of winter oilseed rape during growth?***Table S1:** Mean air temperature on the day of labeling, mean plant age at labeling (lab.) and harvest (har.) as well as the C amounts of the shoots, taproots and lateral roots ($> 300 \mu\text{m}$) 21 days after labeling for each container (Pot) in each of the three experiments (Exp.).

Pot no.	Exp. no.	Geno-type	Age at lab.	Age at har.	Air temperature	C amount of		
			[d]	[d]	[°C]	shoot [g]	tap-root [g]	lateral roots [g]
33	2	DH-1	143	164	15.0	6.176	1.132	2.003
34	2	DH-1	143	164	15.0	6.066	1.175	2.090
35	2	DH-1	143	164	15.0	6.516	0.822	2.009
36	2	DH-1	143	164	15.0	5.557	1.016	1.869
37	2	DH-2	143	164	15.0	5.962	0.562	1.101
38	2	DH-2	143	164	15.0	6.096	0.621	1.207
39	2	DH-2	143	164	15.0	5.767	0.570	1.064
40	2	DH-2	143	164	15.0	6.625	0.689	1.545
41	2	DH-2	143	164	15.0	5.934	0.687	1.217
42	2	DH-2	143	164	15.0	6.283	0.566	1.226
43	2	VISBY	143	164	15.0	6.477	0.693	1.944
44	2	VISBY	143	164	15.0	5.741	0.832	1.516
45	2	VISBY	143	164	15.0	6.049	0.825	2.363
46	2	VISBY	143	164	15.0	6.078	0.851	2.288
47	2	VISBY	143	164	15.0	7.080	0.803	1.910
48	2	VISBY	143	164	15.0	6.645	0.752	2.021
49	3	AVATAR	177	198	19.3	16.021	1.005	1.808
50	3	AVATAR	177	198	19.3	16.793	0.800	2.000
51	3	AVATAR	177	198	19.3	16.813	0.891	2.652
52	3	AVATAR	177	198	19.3	15.658	0.839	1.706
53	3	AVATAR	177	198	19.3	15.957	0.770	2.601
54	3	AVATAR	177	198	19.3	16.764	0.946	2.013
55	3	DH-1	177	198	19.3	13.821	1.146	2.667
56	3	DH-1	177	198	19.3	12.841	1.233	2.138
57	3	DH-1	177	198	19.3	13.672	1.244	2.227
58	3	DH-1	177	198	19.3	15.121	1.283	2.422
59	3	DH-1	177	198	19.3	13.245	1.218	2.151
60	3	DH-1	177	198	19.3	12.487	1.329	1.888
61	3	DH-2	177	198	19.3	13.454	0.697	1.666
62	3	DH-2	177	198	19.3	14.112	0.776	1.636
63	3	DH-2	177	198	19.3	14.481	0.728	1.739
64	3	DH-2	177	198	19.3	14.586	0.705	1.586
65	3	DH-2	177	198	19.3	13.786	0.617	1.312
66	3	DH-2	177	198	19.3	13.852	0.856	1.573
67	3	VISBY	177	198	19.3	15.321	0.837	1.806
68	3	VISBY	177	198	19.3	14.795	0.819	1.615

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Pot no.	Exp. no.	Geno-type	Age at lab. [d]	Age at har. [d]	Air temperature [°C]	C amount of shoot [g]	C amount of tap-root [g]	C amount of lateral roots [g]
69	3	VISBY	177	198	19.3	15.211	0.791	1.610
70	3	VISBY	177	198	19.3	15.596	0.894	1.814
71	3	VISBY	177	198	19.3	16.241	0.719	1.938
72	3	VISBY	177	198	19.3	15.999	0.800	1.581

Table S2: Relative partitioning of ^{14}C to the shoots, taproots, lateral roots, belowground respiration (belowgr. reps.) and detectable rhizodeposition (detct. rhizodep.) for each container (Pot) in each of the three experiments (Exp.).

Pot no.	Exp. no.	Geno-type	^{14}C partitioning coefficients of				
			shoot [%]	tap-root [%]	lateral roots [%]	belowgr. resp. [%]	detect. rhizodep. [%]
1	1	AVATAR	57.942	6.010	9.157	21.938	4.952
2	1	AVATAR	56.297	4.642	12.066	22.315	4.681
3	1	AVATAR	55.853	6.343	11.653	20.918	5.233
4	1	AVATAR	55.247	5.311	9.649	24.106	5.688
5	1	AVATAR	58.356	6.845	9.962	20.046	4.791
6	1	AVATAR	62.087	2.683	13.162	18.261	3.807
7	1	DH-1	53.852	5.413	10.752	24.869	5.115
8	1	DH-1	56.985	6.596	9.815	21.718	4.886
9	1	DH-1	54.984	5.694	11.702	22.270	5.350
10	1	DH-1	51.704	6.982	12.648	23.355	5.312
11	1	DH-1	50.021	6.970	14.036	23.810	5.164
12	1	DH-1	47.934	5.154	13.821	27.240	5.851
13	1	DH-2	54.601	4.070	14.513	21.712	5.104
14	1	DH-2	52.861	3.860	10.311	25.715	7.253
15	1	DH-2	56.751	4.523	8.931	23.612	6.184
16	1	DH-2	54.414	5.453	10.491	23.426	6.216
17	1	DH-2	51.987	4.378	15.559	21.186	6.890
18	1	DH-2	57.366	3.799	8.055	22.844	7.937
19	1	VISBY	56.748	5.193	10.872	23.248	3.939
20	1	VISBY	53.986	5.153	7.652	27.498	5.712
21	1	VISBY	57.214	5.528	13.504	20.193	3.561
22	1	VISBY	53.665	5.583	12.072	23.735	4.943

4 *What regulates the rhizodeposition of winter oilseed rape during growth?***Table S2:** Relative partitioning of ¹⁴C among shoot, taproot, lateral roots, belowground respiration (belowgr. reps.) and detectable rhizodeposition (detect. rhizodep.) for each container (Pot) in each of the three experiments (Exp.).

Pot no.	Exp. no.	Geno-type	shoot [%]	¹⁴ C partitioning coefficients of			
				tap-root [%]	lateral roots [%]	belowgr. resp. [%]	detect. rhizodep. [%]
23	1	VISBY	60.501	6.336	9.191	19.214	4.758
24	1	VISBY	52.312	4.474	10.866	27.318	5.030
25	2	AVATAR	84.746	0.751	2.012	10.749	1.742
26	2	AVATAR	84.905	0.666	2.105	10.240	2.084
27	2	AVATAR	85.968	0.576	2.092	9.925	1.440
28	2	AVATAR	86.388	0.482	1.662	9.697	1.772
29	2	AVATAR	80.595	0.975	2.133	14.844	1.454
30	2	AVATAR	83.461	0.758	2.543	11.698	1.541
31	2	DH-1	84.093	1.482	2.711	10.095	1.620
32	2	DH-1	83.751	1.345	3.187	10.387	1.330
33	2	DH-1	79.931	1.343	3.560	13.207	1.960
34	2	DH-1	81.777	1.714	3.294	11.424	1.791
35	2	DH-1	80.838	0.940	2.930	13.429	1.863
36	2	DH-1	78.365	1.318	3.392	14.851	2.074
37	2	DH-2	76.356	0.385	3.044	18.075	2.140
38	2	DH-2	79.985	0.748	2.742	14.947	1.578
39	2	DH-2	76.846	1.132	3.932	15.994	2.095
40	2	DH-2	84.269	1.023	2.904	10.064	1.741
41	2	DH-2	80.352	1.060	3.330	13.580	1.677
42	2	DH-2	81.953	0.920	3.402	11.823	1.903
43	2	VISBY	83.927	0.537	1.809	12.023	1.703
44	2	VISBY	86.351	0.834	2.662	8.736	1.418
45	2	VISBY	85.427	0.819	2.784	9.004	1.967
46	2	VISBY	89.221	0.700	1.876	6.533	1.669
47	2	VISBY	85.400	0.779	1.982	9.582	2.257
48	2	VISBY	87.880	0.695	1.953	8.045	1.427
49	3	AVATAR	92.026	0.058	1.296	5.817	0.802
50	3	AVATAR	93.846	0.040	1.029	4.407	0.678
51	3	AVATAR	93.793	0.050	0.995	4.518	0.644
52	3	AVATAR	92.868	0.074	0.881	5.037	1.141
53	3	AVATAR	92.313	0.080	1.168	5.688	0.752
54	3	AVATAR	93.003	0.069	1.137	4.954	0.838
55	3	DH-1	91.682	0.105	1.339	5.949	0.926
56	3	DH-1	92.127	0.124	1.266	5.521	0.962
57	3	DH-1	90.251	0.209	1.877	6.282	1.380
58	3	DH-1	87.178	0.118	1.192	10.600	0.911

Table S2: Relative partitioning of ^{14}C among shoot, taproot, lateral roots, belowground respiration (belowgr. reps.) and detectable rhizodeposition (detct. rhizodep.) for each container (Pot) in each of the three experiments (Exp.).

Pot no.	Exp. no.	Geno-type	^{14}C partitioning coefficients of				
			shoot [%]	tap-root [%]	lateral roots [%]	belowgr. resp. [%]	detect. rhizodep. [%]
59	3	DH-1	87.774	0.227	1.899	8.849	1.250
60	3	DH-1	91.151	0.215	1.694	5.816	1.123
61	3	DH-2	90.471	0.039	0.728	8.185	0.577
62	3	DH-2	90.127	0.059	0.735	8.467	0.612
63	3	DH-2	93.574	0.069	0.885	4.779	0.693
64	3	DH-2	92.011	0.092	0.995	5.959	0.943
65	3	DH-2	91.750	0.098	1.296	5.815	1.041
66	3	DH-2	90.644	0.092	1.292	6.983	0.990
67	3	VISBY	93.550	0.079	0.988	4.631	0.752
68	3	VISBY	93.313	0.091	0.761	4.941	0.895
69	3	VISBY	94.723	0.048	0.612	3.908	0.708
70	3	VISBY	94.615	0.058	0.651	3.946	0.731
71	3	VISBY	95.789	0.053	0.618	3.003	0.537
72	3	VISBY	91.518	0.106	1.039	6.282	1.055