

Supplementary Data Table S1. Nectar and nectar sugar production in 23 varieties of winter oilseed rape.

Variety	Variety type	Nectar flower ⁻¹ (ul)	mean Glucose (umole l ⁻¹)	mean Fructose (umole l ⁻¹)	mean Sucrose (umole l ⁻¹)	Sugar concentration (ug per ul)	Sugar flower ⁻¹ (ug)
avatar	gms	0.85	602.40	423.24	8.48	375.36	320.04
avatar	gms	1.63	425.73	323.49	2.62	271.76	443.73
avatar	gms	1.70	345.79	264.98	1.92	221.38	375.87
avatar	gms	2.82	257.98	202.42	1.72	167.07	470.49
avatar	gms	2.34	307.76	235.28	0.98	196.34	459.13
avatar	gms	0.88	539.78	384.84	3.11	335.29	295.82
avatar	gms	0.45	491.83	357.81	4.22	309.03	139.67
cabernet	op	0.84	633.77	430.98	5.82	387.63	325.85
cabernet	op	0.52	533.75	375.81	1.85	329.00	169.71
cabernet	op	0.89	651.45	448.18	5.64	400.08	356.42
cabernet	op	0.59	751.45	510.83	4.36	457.81	269.56
cabernet	op	0.28	708.51	480.29	5.71	432.25	119.88
camelot	op	0.54	488.47	343.37	4.99	303.15	165.07
camelot	op	0.82	447.22	325.05	2.30	279.84	228.39
camelot	op	1.57	295.33	224.07	0.93	187.79	295.06
camelot	op	0.62	588.57	416.70	7.34	367.24	227.99
camelot	op	0.92	427.60	301.44	1.82	263.93	243.72
camelot	op	0.46	669.06	462.97	4.08	410.68	186.99
camelot	op	0.42	599.52	423.42	3.69	371.11	156.37
cash	op	1.12	660.03	469.30	3.23	409.13	460.11
cash	op	0.68	576.73	423.27	2.52	362.04	246.64
cash	op	1.09	319.97	233.85	0.88	200.16	218.30
cash	op	0.34	604.73	431.05	3.36	375.51	128.50
cash	op	0.53	617.05	431.10	1.72	378.85	199.29
cash	op	0.73	643.67	453.80	4.24	398.35	288.80
cash	op	0.59	620.17	448.91	3.45	387.57	229.72
compass	gms	1.14	558.41	395.45	5.35	347.35	396.02
compass	gms	0.73	588.50	424.48	1.38	365.94	268.74
compass	gms	2.06	423.14	310.76	1.59	265.53	546.65
compass	gms	1.09	348.15	253.61	0.61	217.25	236.14
compass	gms	0.37	619.36	428.39	3.71	380.06	139.20
compass	gms	0.83	662.88	468.78	3.68	410.28	340.62
compass	gms	0.80	501.46	360.14	0.81	311.01	250.26
cracker	gms	0.87	641.87	455.28	4.43	398.36	348.07
cracker	gms	0.58	501.56	376.59	1.42	317.39	182.50
cracker	gms	1.27	352.96	275.40	0.91	227.04	288.05
cracker	gms	1.34	539.35	397.44	3.97	340.26	456.83
cracker	gms	0.73	578.47	415.65	3.16	360.36	264.08
cracker	gms	0.49	732.60	515.62	4.28	452.69	222.22
cracker	gms	0.66	626.05	452.66	3.04	390.76	258.63
dimension	gms	0.51	608.49	425.09	3.99	375.15	193.14
dimension	gms	0.82	584.00	418.56	3.51	363.64	297.96
dimension	gms	0.91	649.73	460.75	6.98	404.90	366.73
dimension	gms	1.60	240.93	186.31	0.13	154.03	247.03
dimension	gms	1.01					
dimension	gms	0.73					
excalibur	cms	1.16	473.44	332.17	2.07	291.69	338.48
excalibur	cms	1.08	335.56	256.96	0.60	213.90	230.11
excalibur	cms	0.75	650.23	446.88	4.17	398.17	296.76
excalibur	cms	0.79	596.43	417.91	5.09	368.98	289.70

excalibur	cms	1.30	454.61	325.36	2.49	282.75	367.22
excalibur	cms	0.66	571.21	399.12	2.38	351.26	231.75
excalibur	cms	0.76	539.17	381.37	2.32	333.28	253.92
expower	cms	0.63	565.11	396.88	4.34	349.60	219.96
expower	cms	0.62	327.28	250.91	2.04	209.73	130.97
expower	cms		269.97	202.99	1.15	171.20	
expower	cms	0.59	589.76	413.63	6.10	365.71	216.95
expower	cms	1.29	354.75	257.51	0.50	220.95	284.13
expower	cms	0.31	697.86	477.37	5.97	427.55	131.27
expower	cms	0.21	351.53	263.17	1.28	222.36	47.25
fashion	op	0.95	288.39	220.89	1.12	184.27	174.77
fashion	op	0.97	482.50	370.37	3.18	309.49	299.09
fashion	op	0.65	681.95	487.38	2.47	423.03	273.54
fashion	op	0.27	520.24	363.83	8.22	324.18	85.98
fashion	op	0.57	652.86	474.37	2.93	408.17	233.58
fashion	op		637.72	457.28	3.36	396.85	
fighter	gms	2.32	584.69	419.12	2.40	363.33	842.82
fighter	gms	1.09	307.96	240.45	0.59	198.01	216.11
fighter	gms	1.08	602.19	426.21	3.69	373.08	401.21
fighter	gms	1.47	586.79	416.22	3.81	364.01	536.54
fighter	gms	1.41	546.70	388.20	2.99	338.91	479.33
fighter	gms	1.15	590.12	414.43	2.13	363.42	418.12
fighter	gms	1.43	601.16	428.05	3.79	373.44	535.42
flash	cms	0.22	489.72	340.87	26.00	317.08	70.35
flash	cms	0.87	665.56	471.43	3.62	412.16	356.77
flash	cms	0.81	657.08	458.71	6.55	406.53	327.38
flash	cms	1.56	611.82	435.90	5.77	381.47	594.37
flash	cms	1.46	483.69	348.10	4.82	303.01	442.68
flash	cms	1.03	599.58	423.80	4.93	372.12	382.97
flash	cms	0.62	693.11	488.96	6.58	430.42	268.01
marathon	gms	0.97	665.63	457.77	3.28	407.03	396.09
marathon	gms	1.57	635.82	459.13	4.04	397.30	622.65
marathon	gms	1.74	386.32	286.17	2.27	243.87	424.48
marathon	gms	1.81	376.74	280.77	2.10	238.35	430.43
marathon	gms	2.12	309.97	239.21	1.14	198.66	420.50
marathon	gms	0.65	634.26	445.47	4.06	391.83	253.06
PR45D05	cms	0.13	419.20	301.41	5.12	263.16	34.74
PR45D05	cms	0.54	624.09	452.51	7.53	393.08	213.33
PR45D05	cms	0.56	624.44	432.77	7.90	386.34	216.31
PR45D05	cms	0.57	610.75	417.28	5.31	374.06	211.58
PR45D05	cms	0.63	588.84	409.65	5.23	363.35	228.80
PR45D05	cms	0.60	623.85	442.30	6.09	388.32	233.60
PR46W21	cms	1.21	565.33	387.24	2.47	344.92	417.90
PR46W21	cms	0.68	504.03	360.48	3.80	314.10	212.92
PR46W21	cms	1.42	382.26	277.17	2.17	239.09	340.21
PR46W21	cms	0.66	594.15	414.96	3.57	366.05	243.08
PR46W21	cms	0.32	678.31	450.41	6.43	411.10	132.64
PR46W21	cms	0.75	579.98	410.43	4.59	360.01	269.44
PT211	cms	0.67	283.10	216.46	0.06	180.04	120.97
PT211	cms	0.64	740.40	522.75	5.45	458.87	295.26
PT211	cms	0.91	383.65	288.25	1.66	243.23	221.19
PT211	cms	0.68	376.22	281.18	1.45	237.87	160.56
PT211	cms	1.03	579.03	406.04	2.54	356.68	368.49
PT211	cms	0.70	588.93	424.98	3.73	367.89	258.33
PT211	cms	0.93	623.53	450.03	3.54	389.25	361.48
quartz	op	0.55	473.06	341.78	4.77	296.86	162.61

quartz	op	0.67	322.51	258.56	12.82	218.14	145.59
quartz	op	0.39	572.48	418.15	5.20	360.51	141.53
quartz	op	0.98	351.44	267.11	2.25	224.41	220.73
quartz	op	0.86	457.47	340.75	2.86	289.57	248.31
quartz	op	0.38	670.80	482.14	4.81	418.72	159.37
quartz	op	1.04	318.03	248.24	0.09	204.10	212.14
rhino	gms	0.62	308.41	238.93	3.42	199.56	124.18
rhino	gms	1.07	567.56	408.66	3.23	353.96	377.01
rhino	gms	1.31	596.17	428.58	4.15	372.07	485.64
rhino	gms	1.65	308.60	235.32	0.00	195.99	322.99
rhino	gms	1.03	623.45	448.16	4.04	388.89	401.16
rhino	gms	0.61	626.46	453.19	4.89	392.37	238.36
rivalda	op	0.71	594.86	432.56	3.85	372.83	265.84
rivalda	op	0.72	706.34	505.31	4.96	439.97	317.61
rivalda	op	1.14	272.15	215.40	2.48	177.37	202.25
rivalda	op	0.81	449.98	335.33	3.58	285.41	232.25
rivalda	op	0.52	518.38	375.92	2.34	323.84	169.89
rivalda	op	1.40	258.45	203.93	0.41	166.89	234.23
rivalda	op	0.37	648.55	458.65	0.97	399.61	149.11
sesame	op	0.39	538.36	375.76	1.29	330.26	127.63
sesame	op	0.40	524.97	386.03	3.47	330.63	132.08
sesame	op	0.51	615.55	431.76	5.83	381.36	196.14
sesame	op	0.86	352.87	258.28	1.77	221.42	190.40
sesame	op	0.64	475.47	337.92	0.16	293.19	187.98
sesame	op	0.01					
sesame	op	0.18	783.08	535.89	4.08	478.05	84.55
thorin	gms	0.73	276.07	199.94	0.00	171.51	124.97
thorin	gms	1.27	509.51	366.47	1.31	316.53	400.61
thorin	gms	1.49	375.04	281.38	3.14	238.67	354.46
thorin	gms	1.14	493.27	357.09	3.76	308.98	351.78
thorin	gms	0.85	542.33	375.92	1.00	331.55	281.64
thorin	gms	1.25	451.08	319.86	2.00	279.16	348.51
troy	gms	0.66	374.55	266.92	1.84	232.39	154.39
troy	gms	0.76	298.00	235.48	2.50	193.93	146.86
troy	gms	0.91	477.11	345.11	3.12	298.40	271.35
troy	gms	0.90	537.38	383.46	2.08	333.22	300.68
troy	gms	1.38	328.98	243.54	0.00	206.29	284.70
troy	gms	1.03	508.34	365.80	4.29	317.91	328.04
troy	gms	0.18					
vision	op	0.10	215.30	168.78	0.55	138.76	13.88
vision	op	0.66	637.92	471.25	1.42	400.63	264.16
vision	op	0.64	602.02	434.20	2.94	375.39	240.04
vision	op	2.20	531.27	377.84	1.92	328.89	724.84
vision	op	0.57	650.18	456.62	3.35	401.09	227.24
vision	op	0.32	715.25	503.99	4.98	442.72	142.85
vision	op	0.11	542.17	397.98	5.26	342.36	38.60

Supplementary Data Table S2. Flower sizes of 24 varieties of winter oilseed rape.

Variety	Variety type	Petal area mm ²
avatar	gms	67.916
avatar	gms	96.168
avatar	gms	101.586
avatar	gms	87.91
avatar	gms	71.079
avatar	gms	78.606
avatar	gms	94.33
avatar	gms	100.738
avatar	gms	97.66
avatar	gms	71.782
avatar	gms	69.735
avatar	gms	68.071
cabernet	op	87.618
cabernet	op	100.677
cabernet	op	103.675
cabernet	op	97.323
cabernet	op	92.019
cabernet	op	90.797
cabernet	op	103.005
cabernet	op	101.23
cabernet	op	97.873
cabernet	op	90.85
cabernet	op	93.085
cabernet	op	97.283
camelot	op	55.933
camelot	op	84.642
camelot	op	72.04
camelot	op	74.049
camelot	op	83.91
camelot	op	58.478
camelot	op	51.973
camelot	op	80.899
camelot	op	79.768
camelot	op	81.713
camelot	op	85.291
camelot	op	68.26
camelot	op	68.084
camelot	op	63.985
compass	gms	83.9
compass	gms	117.253
compass	gms	102.741
compass	gms	76.212
compass	gms	91.088
compass	gms	91.757
compass	gms	106.164
compass	gms	108.303
compass	gms	104.729
compass	gms	76.225

compass	gms	74.858
compass	gms	75.67
cracker	gms	86.942
cracker	gms	98.78
cracker	gms	110.712
cracker	gms	82.02
cracker	gms	97.282
cracker	gms	89.391
cracker	gms	90.376
cracker	gms	100.089
cracker	gms	101.084
cracker	gms	94.673
cracker	gms	97.717
cracker	gms	100.099
cracker	gms	95.416
cash	op	96.755
cash	op	77.934
cash	op	97.774
cash	op	106.24
cash	op	79.167
cash	op	76.856
cash	op	88.976
cash	op	86.734
cash	op	96.453
cash	op	96.199
cash	op	84.709
cash	op	80.293
cash	op	75.524
cash	op	74.749
cash	op	73.969
cash	op	74.641
dimension	gms	59.22
dimension	gms	89.25
dimension	gms	94.858
dimension	gms	99.394
dimension	gms	64.369
dimension	gms	79.898
dimension	gms	94.483
dimension	gms	101.751
dimension	gms	100.315
dimension	gms	96.497
dimension	gms	72.04
dimension	gms	71.593
dimension	gms	71.271
excalibur	cms	79.96
excalibur	cms	88.607
excalibur	cms	89.748
excalibur	cms	97.275
excalibur	cms	83.454
excalibur	cms	91.563

excalibur	cms	101.282
excalibur	cms	94.348
excalibur	cms	92.483
excalibur	cms	103.767
excalibur	cms	101.785
excalibur	cms	105.4
expower	cms	99.043
expower	cms	102.688
expower	cms	87.673
expower	cms	98.663
expower	cms	91.079
expower	cms	80.879
expower	cms	89.098
expower	cms	83.319
expower	cms	87.883
expower	cms	98.048
expower	cms	96.999
expower	cms	99.616
expower	cms	87.821
expower	cms	83.836
expower	cms	87.711
fighter	gms	74.388
fighter	gms	81.049
fighter	gms	92.676
fighter	gms	98.085
fighter	gms	76.276
fighter	gms	81.665
fighter	gms	81.64
fighter	gms	89.158
fighter	gms	78.238
fighter	gms	81.582
fighter	gms	75.555
fighter	gms	70.358
fighter	gms	78.442
fighter	gms	78.524
flash	cms	44.696
flash	cms	48.238
flash	cms	81.802
flash	cms	96.549
flash	cms	95.009
flash	cms	86.215
flash	cms	96.044
flash	cms	91.54
flash	cms	67.557
flash	cms	88.655
flash	cms	99.2
flash	cms	92.902
flash	cms	100.283
flash	cms	81.011
flash	cms	77.494

flash	cms	76.641
fashion	op	79.672
fashion	op	80.913
fashion	op	100.765
fashion	op	75.877
fashion	op	79.961
fashion	op	50.459
fashion	op	91.144
fashion	op	88.651
fashion	op	90.182
fashion	op	78.892
fashion	op	78.015
fashion	op	76.486
marathon	gms	94.221
marathon	gms	71.803
marathon	gms	98.389
marathon	gms	95.877
marathon	gms	93.209
marathon	gms	88.21
marathon	gms	92.757
marathon	gms	78.156
marathon	gms	104.831
marathon	gms	101.321
marathon	gms	104.036
marathon	gms	94.879
marathon	gms	97.105
marathon	gms	97.975
PR45D05	cms	85.424
PR45D05	cms	89.908
PR45D05	cms	111.517
PR45D05	cms	88.923
PR45D05	cms	80.381
PR45D05	cms	84.924
PR45D05	cms	77.588
PR45D05	cms	69.485
PR45D05	cms	84.512
PR45D05	cms	101.94
PR45D05	cms	99.872
PR45D05	cms	106.55
PR45D05	cms	102.738
PT211	cms	69.264
PT211	cms	76.612
PT211	cms	78.202
PT211	cms	71.284
PT211	cms	74.808
PT211	cms	70.786
PT211	cms	89.985
PT211	cms	89.524
PT211	cms	99.612
PT211	cms	84.544

PT211	cms	90.582
PT211	cms	87.588
PR46W21	cms	89.615
PR46W21	cms	100.992
PR46W21	cms	118.869
PR46W21	cms	96.066
PR46W21	cms	92.319
PR46W21	cms	80.738
PR46W21	cms	92.31
PR46W21	cms	113.246
PR46W21	cms	113.207
PR46W21	cms	112.737
PR46W21	cms	94.463
PR46W21	cms	98.753
PR46W21	cms	102.738
quartz	op	86.621
quartz	op	87.35
quartz	op	94.709
quartz	op	99.347
quartz	op	88.882
quartz	op	87.652
quartz	op	87.065
quartz	op	83.807
quartz	op	89.389
quartz	op	92.365
quartz	op	87.798
quartz	op	84.732
quartz	op	80.734
quartz	op	82.597
quartz	op	84.996
rhino	gms	96.735
rhino	gms	92.916
rhino	gms	77.675
rhino	gms	81.761
rhino	gms	75.177
rhino	gms	71.37
rhino	gms	70.393
rhino	gms	94.527
rhino	gms	98.147
rhino	gms	94.559
rhino	gms	69.074
rhino	gms	71.053
rhino	gms	67.191
rivalda	op	83.701
rivalda	op	86.518
rivalda	op	92.262
rivalda	op	94.31
rivalda	op	90.154
rivalda	op	72.701
rivalda	op	72.129

rivalda	op	80.926
rivalda	op	87.773
rivalda	op	90.92
rivalda	op	87.339
rivalda	op	84.48
sequoia	cms	82.192
sequoia	cms	76.546
sequoia	cms	78.174
sequoia	cms	103.785
sequoia	cms	93.212
sequoia	cms	90.102
sequoia	cms	87.574
sequoia	cms	77.972
sesame	op	82.339
sesame	op	78.506
sesame	op	71.113
sesame	op	87.415
sesame	op	86.45
sesame	op	82.215
sesame	op	70.102
sesame	op	77.613
sesame	op	81.181
sesame	op	81.667
sesame	op	78.056
sesame	op	74.327
sesame	op	89.074
sesame	op	91.499
sesame	op	76.004
sesame	op	84.7
sesame	op	75.375
sesame	op	82.483
sesame	op	79.004
sesame	op	82.087
sesame	op	79.514
thorin	gms	123.204
thorin	gms	97.63
thorin	gms	111.437
thorin	gms	109.982
thorin	gms	93.993
thorin	gms	101.497
thorin	gms	96.586
thorin	gms	97.461
thorin	gms	99.509
thorin	gms	100.019
troy	gms	84.219
troy	gms	125.217
troy	gms	97.544
troy	gms	87.167
troy	gms	89.46
troy	gms	102.671

troy	gms	77.061
troy	gms	102.845
troy	gms	122.335
troy	gms	123.737
troy	gms	125.437
troy	gms	85.517
troy	gms	82.793
troy	gms	79.8
vision	op	61.062
vision	op	84.444
vision	op	74.471
vision	op	72.639
vision	op	73.273
vision	op	82.983
vision	op	79.555
vision	op	80.305
vision	op	62.151
vision	op	63.267
vision	op	60.124

Supplementary Data Table S3. Flower production in 24 varieties of winter oilseed rape.

Variety	Variety type	Total flowers plant ⁻¹
avatar	gms	774
avatar	gms	850
avatar	gms	755
avatar	gms	710
avatar	gms	827
cabernet	op	1167
cabernet	op	1067
cabernet	op	947
cabernet	op	1085
camelot	op	859
camelot	op	1093
camelot	op	843
camelot	op	873
camelot	op	1012
cash	op	753
cash	op	886
cash	op	726
cash	op	649
compass	gms	755
compass	gms	811
compass	gms	912
compass	gms	920
compass	gms	807
cracker	gms	1338
cracker	gms	1200
cracker	gms	1076
cracker	gms	982
cracker	gms	949
dimension	gms	922
dimension	gms	1031
dimension	gms	991
dimension	gms	962
dimension	gms	1126
excalibur	cms	732
excalibur	cms	841
excalibur	cms	758
excalibur	cms	662
excalibur	cms	967
expower	cms	1174
expower	cms	1298
expower	cms	1009
expower	cms	1150
expower	cms	989
fashion	op	711
fashion	op	859
fashion	op	858
fashion	op	930
fighter	gms	968

fighter	gms	581
fighter	gms	756
fighter	gms	918
fighter	gms	846
flash	cms	914
flash	cms	848
flash	cms	923
flash	cms	719
flash	cms	1727
marathon	gms	939
marathon	gms	1045
marathon	gms	1183
marathon	gms	925
marathon	gms	903
PR45D05	cms	1291
PR45D05	cms	997
PR46W21	cms	1016
PR46W21	cms	1104
PR46W21	cms	991
PR46W21	cms	1934
PR46W21	cms	857
PT211	cms	563
PT211	cms	845
PT211	cms	762
PT211	cms	960
PT211	cms	1066
quartz	op	931
quartz	op	939
quartz	op	673
quartz	op	847
quartz	op	902
rhino	gms	917
rhino	gms	1036
rhino	gms	1042
rhino	gms	950
rhino	gms	783
rivalda	op	745
rivalda	op	635
rivalda	op	495
rivalda	op	603
rivalda	op	693
sequoia	cms	1673
sequoia	cms	867
sequoia	cms	1442
sesame	op	1855
sesame	op	1384
sesame	op	1096
sesame	op	1276
sesame	op	1162
thorin	gms	830

thorin	gms	752
thorin	gms	763
thorin	gms	776
troy	gms	863
troy	gms	905
troy	gms	904
troy	gms	931
troy	gms	962
vision	op	884
vision	op	1314
vision	op	1385

Supplementary Data Table S4. Linear mixed models, fitting relationships between nectar volume per flower and floral traits using restricted maximum-likelihood (REML).

Fixed Term	Model 1	Model 2
Variety		$F_{22,75.1}=2.31, P=0.004$
Petal area		$F_{1,76.0}=0.55, P=0.462$
Number of flowers plant ⁻¹		$F_{1,66.5}=0.22, P=0.638$
Petal area.variety	$F_{22,23.9}=0.62, P=0.861$	
Number of flowers plant ⁻¹ .variety	$F_{20,23.5}=0.55, P=0.911$	

Supplementary Data Table S5. Linear mixed models, fitting relationships between sugar mass per flower and floral traits using restricted maximum-likelihood (REML).

Fixed Term	Model 1	Model 2
Variety		$F_{22,75.1}=3.18, P<0.001$
Number of flowers plant ⁻¹		$F_{1,68.7}=0.97, P=0.329$
Petal area		$F_{1,54.6}=0.84, P=0.365$
Number of flowers plant ⁻¹ .variety	$F_{20,20.2}=0.77, P=0.714$	
Petal area.variety	$F_{20,21.3}=0.75, P=0.734$	