

Bulletin of Insectology Supplemental Material

Title: **Sugar and protein content in different monofloral pollens - building a database**

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Table S1. GIS coordinates and altitude of the pollen sampling sites.

Site	Locality	Latitude (N)	Longitude (E)	Altitude (m above s.l.)
GE/1	Rapallo (GE)	44.3667	9.2166	196
GE/2	Chiavari (GE)	44.3267	9.3343	138
GE/3	Ne (GE)	44.3460	9.4405	420
GE/4	Vignale (GE)	44.3690	9.3416	300
GE/5	Bargagli (GE)	44.4347	9.0904	566
BO/1	San Giovanni in Persiceto (BO)	44.6320	11.2048	19
BO/2	Bologna (BO)	44.5239	11.3515	36

Table S2. Content (%) of mono- and oligosaccharides, as well as nitrogen (N) and proteins (derived by applying the 6.25 correction factor) in the mono-typical pollen pellets and anther pollen.

(*) The N (and protein) content in the anther pollen is an estimation deriving from the %N in the pellet and corrected for its sugar content.

Note: samples 8 and 9 were collected in the same date and site but from different hives.

ID	Date	Sub-sample	Site	Palynological type	S u g a r s (%)				Nitrogen (%)		Protein (%)	
					fructose	glucose	oligosaccharides	total	pellet	anther(*)	pellet	anther(*)
1	17 May 2015	GE/5	GE/5	<i>Actinidia</i>	16.44	8.46	0.62	25.53	4.33	5.82	27.1	36.4
2	27 June 2016	BO/2	BO/2	<i>Apiaceae</i> f. A < 25 µm	26.58	22.63	9.74	58.95	3.62	8.83	22.6	55.2
3	18 May 2014	GE/5	GE/5	<i>Asphodelus albus</i>	15.32	10.27	1.95	27.54	3.79	5.24	23.7	32.7
4	11 July 2014	BO/1	BO/1	<i>Brassica</i> f. > 25 µm	18.41	14.78	0.29	33.48	3.83	5.75	23.9	36.0
5	5 April 2015	GE/1	GE/1	<i>Brassica</i> f. 20-25 µm	14.11	8.61	1.51	24.23	4.12	5.43	25.7	33.9
6	7 June 2015	GE/3	GE/3	<i>Castanea sativa</i>	20.17	17.91	1.46	39.54	3.70	6.11	23.1	38.2
7	18 May 2014	GE/5	GE/5	<i>Chamaerops</i> f.	20.06	13.01	0.42	33.49	3.57	5.37	22.3	33.6
8	19 July 2015	GE/2	GE/2	<i>Cichorium</i> f.	23.75	16.76	8.82	49.34	2.67	5.27	16.7	32.9
9	19 July 2015	GE/2	GE/2	<i>Cichorium</i> f.	21.28	15.69	7.09	44.06	2.52	4.50	15.7	28.1
10	18 May 2014	GE/5	GE/5	<i>Cistus incanus</i> gr.	19.94	11.89	3.05	34.88	2.81	4.32	17.6	27.0
11	7 June 2015	GE/1	GE/1	<i>Cistus monspeliensis</i> gr.	20.73	13.80	2.45	36.98	2.20	3.49	13.8	21.8
12	7 June 2015	GE/3	GE/3	<i>Clematis</i>	19.08	16.67	0.87	36.63	3.33	5.26	20.8	32.8
13	19 July 2015	GE/2	GE/2	<i>Convolvulus</i>	21.67	15.00	0.28	36.94	3.69	5.85	23.1	36.6
14	18 May 2014	GE/5	GE/5	<i>Cornus sanguinea</i>	13.66	9.02	1.22	23.90	2.94	3.86	18.4	24.1
15	5 April 2015	GE/1	GE/1	<i>Erica arborea</i> gr.	19.61	19.23	1.49	40.33	2.95	4.95	18.5	30.9
16	26 April 2015	GE/1	GE/1	<i>Fraxinus ornus</i>	20.93	18.36	0.78	40.07	3.41	5.69	21.3	35.6
17	20 September 2015	GE/2	GE/2	<i>Hedera</i>	14.83	16.68	3.75	35.26	4.04	6.25	25.3	39.0
18	27 June 2016	BO/2	BO/2	<i>Helianthus annuus</i>	21.35	23.65	0.15	45.15	2.64	4.82	16.5	30.1
19	9 August 2015	GE/1	GE/1	<i>Lagerstroemia</i>	14.28	9.26	4.55	28.09	3.70	5.14	23.1	32.1
20	19 July 2015	GE/2	GE/2	Liliaceae 20-40 µm	19.35	16.45	0.18	35.99	3.26	5.09	20.4	31.8
21	7 June 2015	GE/3	GE/3	Liliaceae 50-70 µm	16.92	12.68	1.09	30.69	4.22	6.09	26.4	38.1
22	19 July, 9 August 2015	GE/1-2	GE/1-2	<i>Linum</i>	29.00	23.14	3.86	56.00	2.84	6.45	17.7	40.3
23	7 June 2015	GE/2	GE/2	<i>Magnolia</i>	19.17	16.06	0.53	35.76	3.80	5.91	23.7	36.9
24	18 May 2014	GE/5	GE/5	<i>Malus/Pyrus</i> f.	17.48	12.59	1.77	31.84	4.22	6.19	26.4	38.7
25	26 April 2015	GE/1	GE/1	<i>Malus/Pyrus</i> f.	18.03	12.62	2.96	33.61	4.32	6.51	27.0	40.7
26	7 June 2015	GE/4	GE/4	<i>Myrtus</i> f.	26.42	16.53	1.53	44.47	4.86	8.76	30.4	54.7
27	7 June, 19 July 2015	GE/2	GE/2	<i>Oenothera</i> f.	17.33	15.12	1.05	33.49	2.71	4.07	16.9	25.5
28	7 June 2015	GE/3	GE/3	<i>Olea</i>	20.33	19.40	0.58	40.31	2.68	4.48	16.7	28.0
29	7 June, 19 July 2015	GE/2	GE/2	<i>Parthenocissus</i>	16.16	11.69	1.16	29.01	3.93	5.53	24.5	34.6
30	28 June, 19 July 2015	GE/2	GE/2	<i>Phoenix</i>	22.03	17.76	0.16	39.95	3.30	5.49	20.6	34.3
31	27 June 2016	BO/2	BO/2	<i>Plantago</i>	19.88	14.33	1.55	35.76	2.34	3.65	14.6	22.8
32	11 July 2014	BO/1	BO/1	Poaceae < 37 µm	16.99	13.24	3.81	34.04	2.63	3.98	16.4	24.9
33	17 May 2015	GE/3	GE/3	<i>Quercus ilex</i> gr.	26.93	14.52	0.34	41.80	3.36	5.78	21.0	36.1
34	26 April 2015	GE/1	GE/1	<i>Quercus robur</i> gr.	20.33	15.80	1.04	37.16	3.45	5.49	21.6	34.3
35	18 May 2014	GE/5	GE/5	<i>Ranunculus arvensis</i>	32.36	21.32	1.79	55.47	2.65	5.96	16.6	37.3
36	7 June 2015	GE/1	GE/1	<i>Rosa</i> f.	21.20	19.16	2.60	42.97	4.14	7.25	25.8	45.3
37	7 June 2015	GE/3	GE/3	<i>Rubus</i> f.	21.73	17.87	1.96	41.57	3.88	6.64	24.2	41.5
38	5 April 2015	GE/1	GE/1	<i>Salix</i>	18.78	15.69	0.53	35.00	3.88	5.98	24.3	37.4
39	9 August 2015	GE/1	GE/1	<i>Taraxacum</i> f.	15.49	8.77	6.98	31.23	2.94	4.27	18.4	26.7
40	27 June 2016	BO/2	BO/2	<i>Zea mays</i>	11.13	10.65	0.00	21.77	3.24	4.14	20.3	25.9