

Supplementary material to the article factors influencing the variability of sunflower achene hulling ability

This document supplements the data from the OCL article. It includes individual scatter plots by trial of the continuous variables associated with the dehulling observations, in order to better visualize the dispersion of the data relative to the dehulling results. It includes, at the end of the document, a table of means by trial.

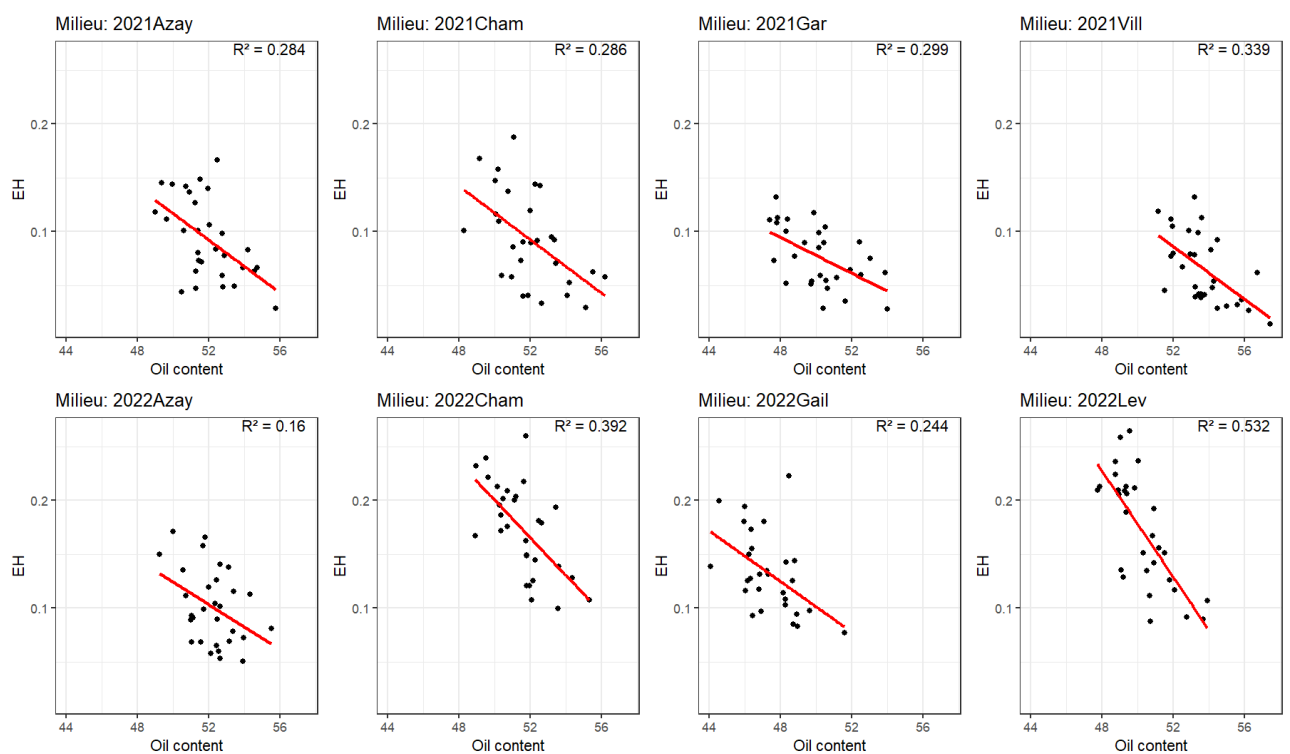


Figure S1: correlations analysis between oil content (%) and dehulling (EH, in g of hulls for 100 g of achenes) for each environment.

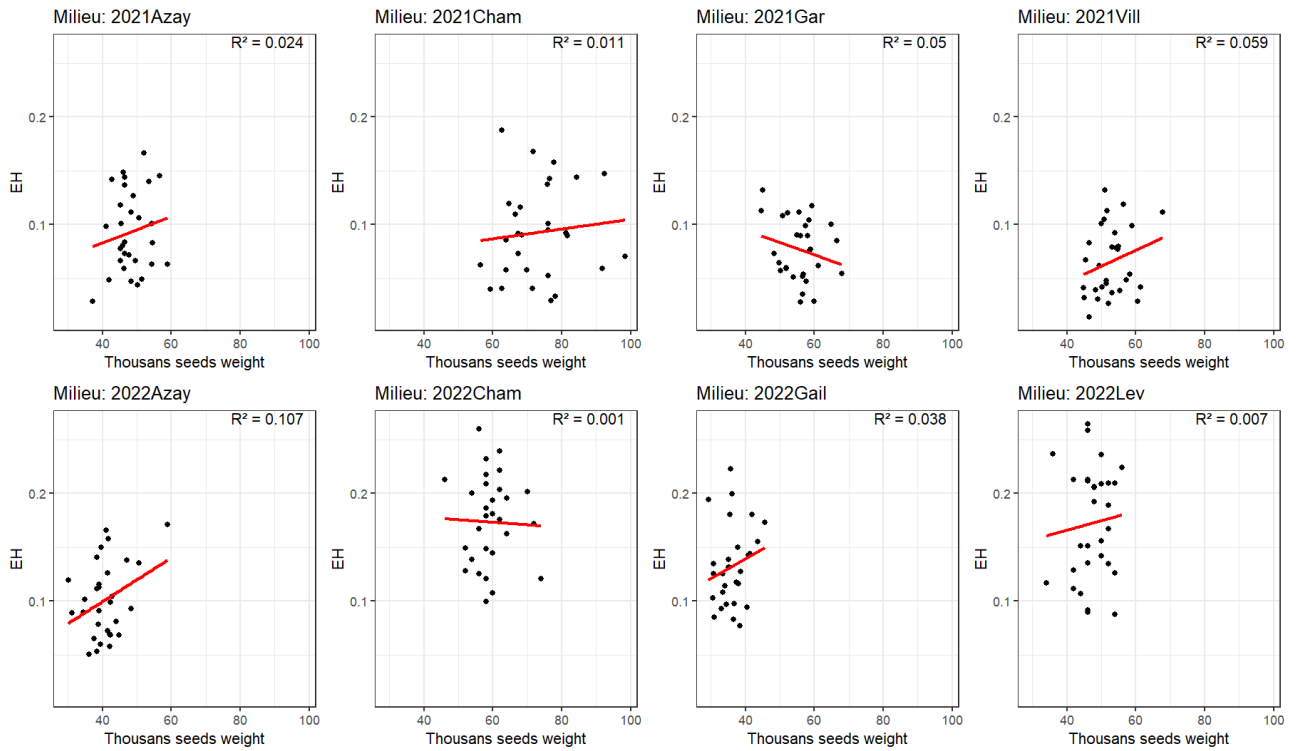


Figure S2: correlations analysis between thousand seeds weight (g) and dehulling (EH, in g of hulls for 100 g of achenes) for each environment.

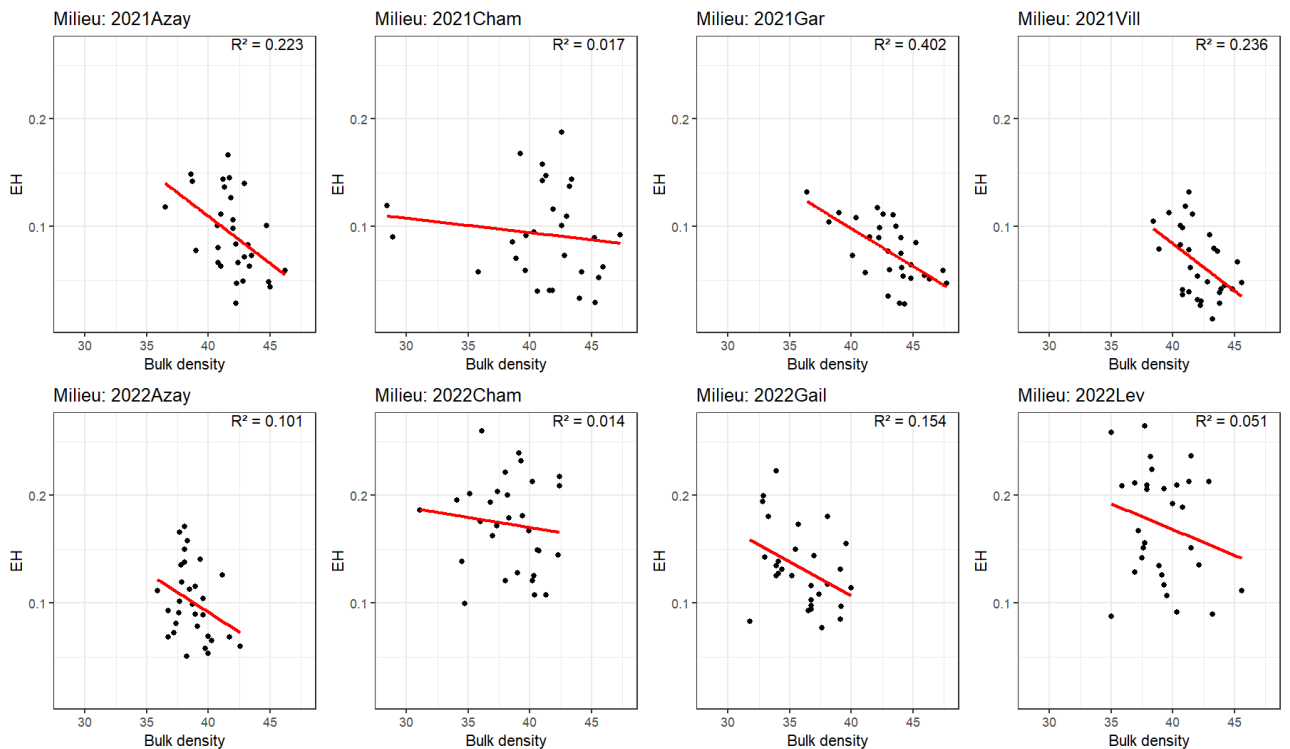


Figure S3: correlations analysis between bulk density (g/100mL) and dehulling (EH, in g of hulls for 100 g of achenes) for each environment.

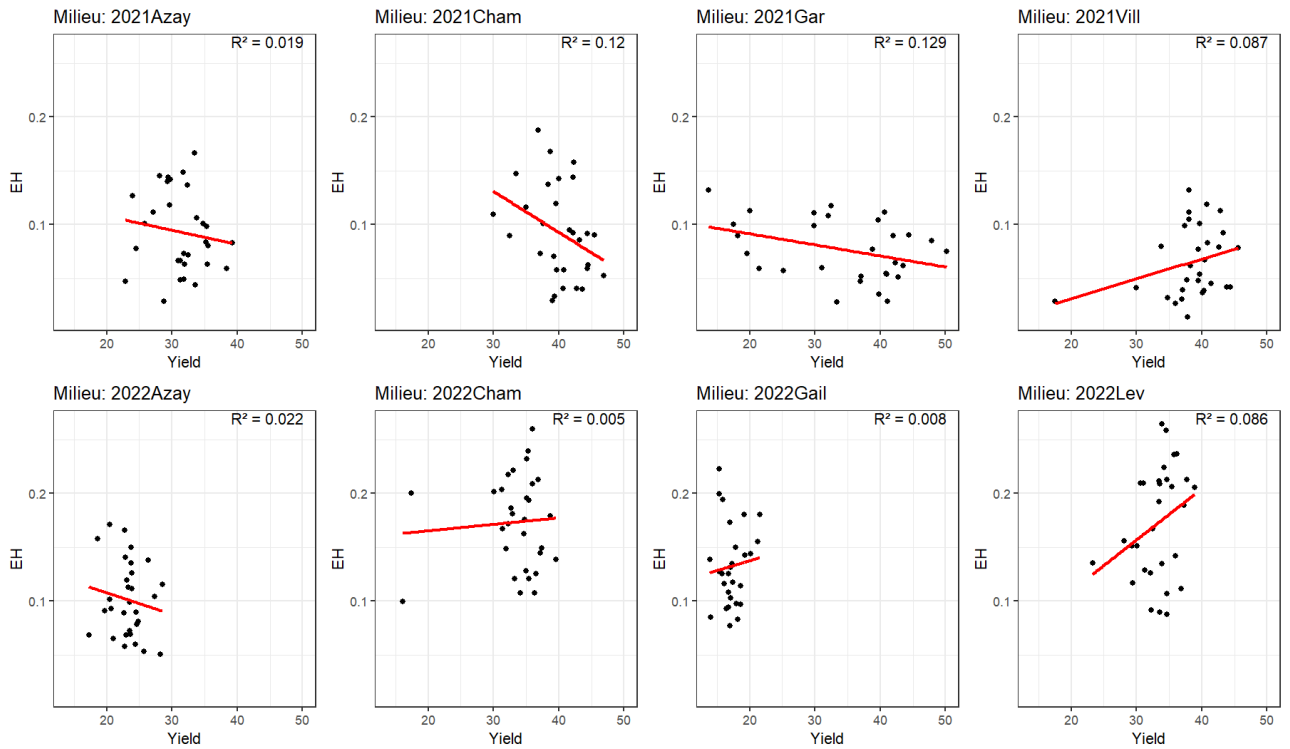


Figure S4: correlations analysis between yield (Qx/ha) and dehulling (EH, in g of hulls for 100 g of achenes) for each environment.

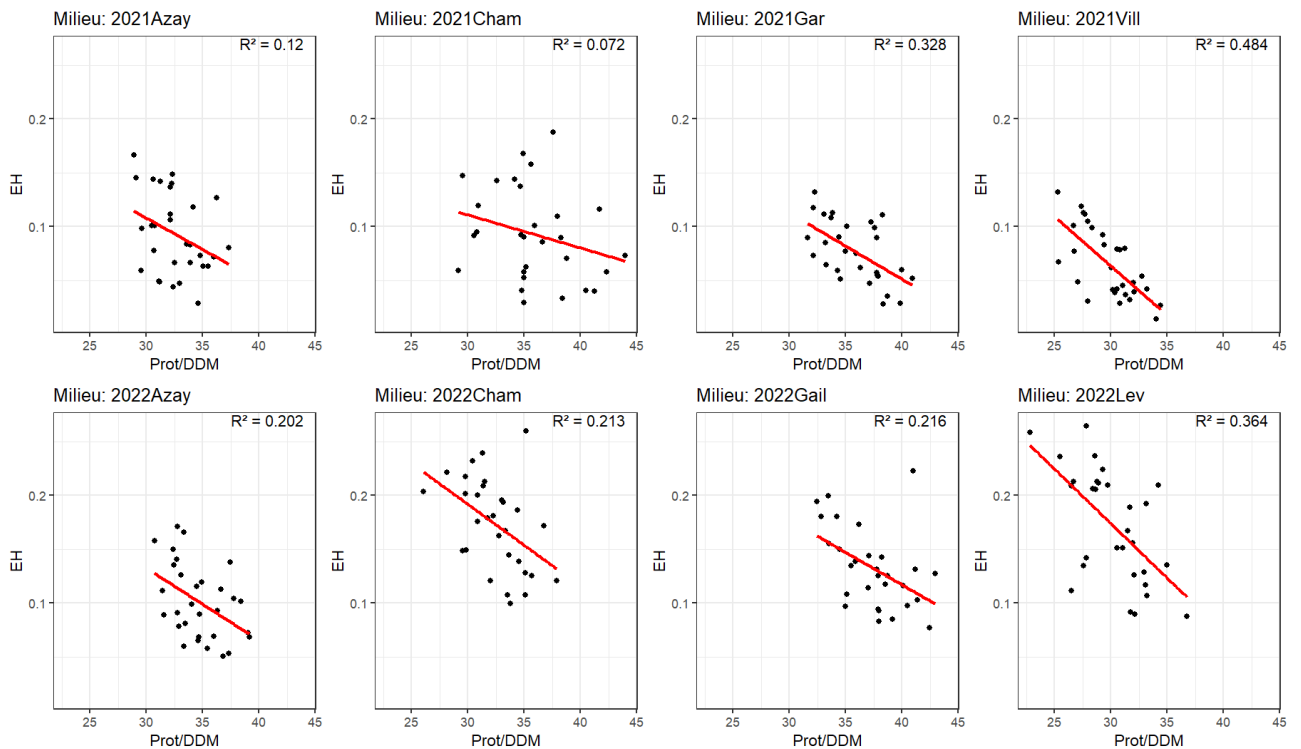


Figure S5: correlations analysis between the content in proteins of dry defatted material (Prot/DDM in g for 100 g of DDM) and dehulling (EH, in g of hulls for 100 g of achenes) for each environment.

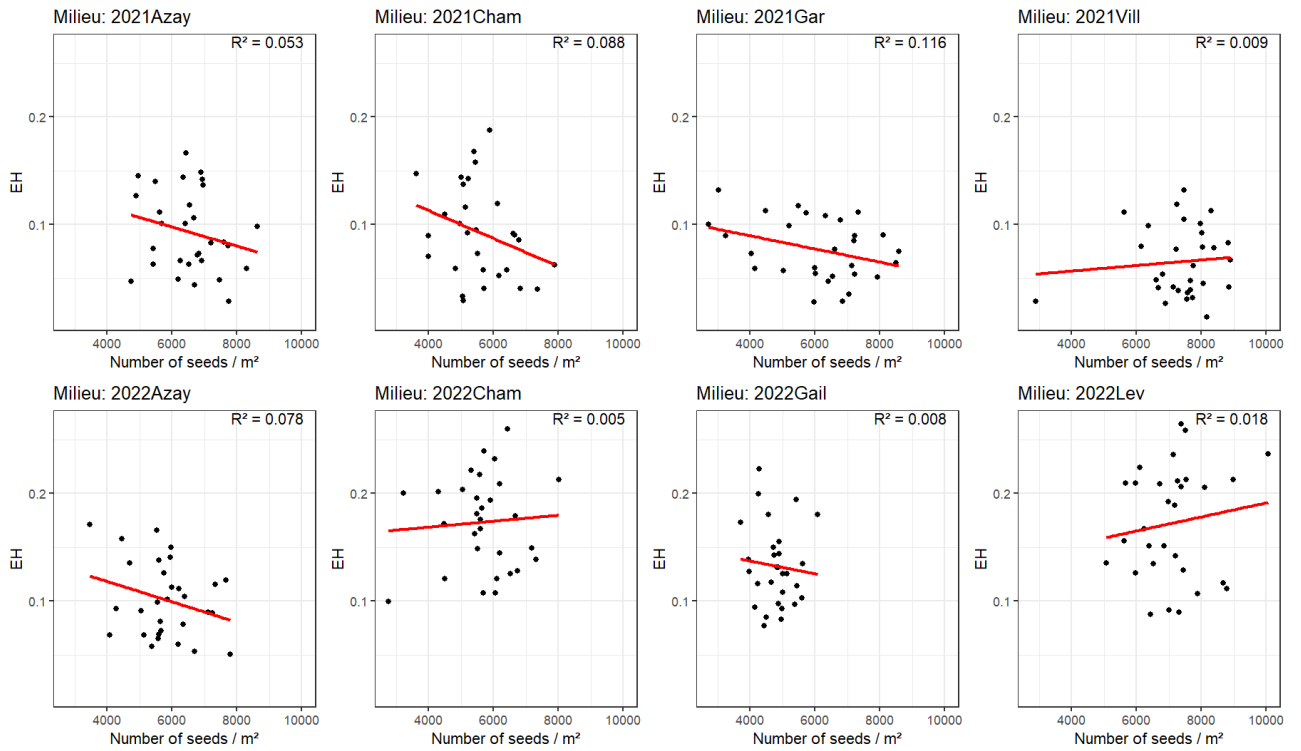


Figure S6: correlations analysis between the number of seeds per square meter and dehulling (EH, in g of hulls for 100 g of achenes) for each environment.

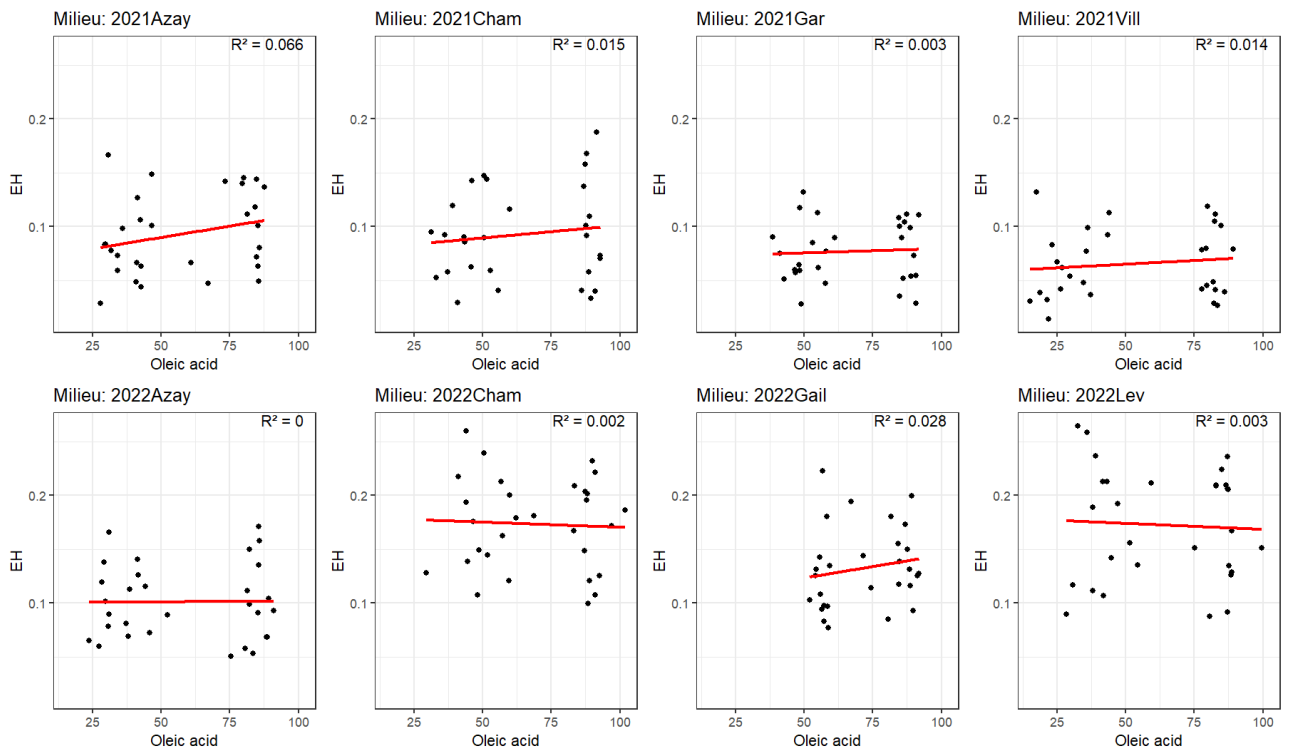


Figure S7: correlations analysis between the oleic acid content in the seeds oil (g/100g) and dehulling (EH, in g of hulls for 100 g of achenes) for each environment.

Table S1: mean values for a selection of studied variables

Environment	EH	Oil%	Bulk density	TSW	Nb seeds/m ²	Oleic acid	Yield (Qx/ha)	Proteins/DDM	WRC_FI	WRC_Fil
2021Azay	9.3%	51.9	41.9	48.2	6543	57.4	31.3	32.6	29.5%	48.2%
2021Cham	9.3%	52.0	41.2	73.3	5572	64.7	40.1	35.9	46.3%	42.2%
2021Gar	7.7%	50.2	43.1	55.8	6097	66.9	34.3	35.9	27.1%	54.4%
2021Vill	6.6%	53.7	42.1	52.8	7375	53.5	38.6	29.8	36.7%	42.4%
2022Azay	10.1%	52.2	38.7	40.9	5809	58.5	23.3	34.7	3.9%	33.5%
2022Cham	17.3%	51.6	38.3	59.4	5692	69.0	33.5	32.4	99.3%	17.4%
2022Gail	13.2%	47.4	36.0	36.2	4800	71.6	17.3	37.5	6.4%	17.2%
2022Lev	17.2%	50.2	39.2	47.4	7109	64.0	33.3	30.2	131%	22.5%
2021	8.2%	51.95	42.1	57.5	6397	60.6	36.1	33.6	34.9%	46.8%
2022	14.5%	50.35	38.1	46.0	5853	65.8	26.9	33.7	60.2%	22.7%

Table S2, summary of the achenes characteristics

CV	Oil content	Oleic acid	Proteins/DDM	Yield	Bulk density	TSW	EH
1	52.92 ± 2.17	81.34 ± 9.41	35.87 ± 2.76	29.62 ± 9.85	40.29 ± 2.97	50.39 ± 14.60	6.1 ± 2.9
2	54.33 ± 1.34	47.08 ± 8.59	35.25 ± 3.29	34.34 ± 9.16	40.41 ± 2.21	52.17 ± 9.12	7.2 ± 2.7
3	50.73 ± 2.09	88.93 ± 2.06	36.76 ± 3.47	32.06 ± 10.14	39.64 ± 2.66	48.86 ± 10.03	7.3 ± 3.6
4	53.39 ± 3.09	37.75 ± 12.70	34.99 ± 1.52	31.07 ± 8.00	40.07 ± 4.38	45.65 ± 16.14	7.6 ± 5.5
5	50.65 ± 2.09	44.36 ± 12.85	33.67 ± 1.98	33.21 ± 10.09	42.34 ± 2.87	49.51 ± 9.53	7.9 ± 3.6
6	51.75 ± 1.60	44.28 ± 12.06	33.91 ± 4.02	31.68 ± 7.97	42.91 ± 5.05	51.11 ± 15.16	8.0 ± 3.5
7	53.09 ± 2.54	34.52 ± 10.27	35.27 ± 3.71	28.81 ± 8.06	39.31 ± 2.60	46.71 ± 11.83	8.1 ± 3.1
8	51.18 ± 2.14	86.50 ± 3.31	35.35 ± 3.89	31.18 ± 8.17	40.62 ± 1.84	50.52 ± 11.32	8.2 ± 3.8
9	51.47 ± 2.06	87.11 ± 3.92	35.27 ± 4.37	29.77 ± 9.18	41.13 ± 3.45	56.59 ± 11.96	8.5 ± 5.1
10	50.67 ± 2.18	88.10 ± 7.01	38.19 ± 3.86	31.90 ± 9.52	39.64 ± 4.25	58.00 ± 10.76	8.8 ± 4.4
11	50.05 ± 2.91	83.73 ± 7.37	32.15 ± 3.88	26.69 ± 8.04	40.08 ± 2.93	51.00 ± 9.80	10.0 ± 4.0
12	51.14 ± 2.00	40.14 ± 13.16	33.42 ± 2.84	33.14 ± 8.76	40.52 ± 2.95	54.15 ± 11.74	10.2 ± 5.3
13	51.79 ± 2.74	38.08 ± 12.48	32.11 ± 3.61	34.42 ± 9.88	41.37 ± 3.28	46.12 ± 14.40	10.6 ± 6.5
14	53.30 ± 2.71	43.19 ± 8.38	34.46 ± 3.00	31.73 ± 8.61	40.69 ± 3.11	48.45 ± 8.65	10.7 ± 5.7
15	48.94 ± 1.78	85.23 ± 3.43	35.30 ± 3.55	30.60 ± 8.35	41.41 ± 2.57	52.91 ± 11.11	10.9 ± 5.7
16	52.41 ± 1.98	41.19 ± 12.01	34.71 ± 2.29	34.97 ± 9.93	40.28 ± 4.63	56.78 ± 12.29	11.3 ± 4.1
17	50.84 ± 2.49	90.81 ± 7.73	36.04 ± 3.72	31.80 ± 8.38	39.23 ± 3.86	54.09 ± 19.28	11.3 ± 4.1
18	51.46 ± 1.67	49.46 ± 9.32	34.69 ± 5.43	30.62 ± 7.74	39.54 ± 2.32	52.68 ± 10.31	11.9 ± 3.2
19	51.61 ± 2.13	58.52 ± 14.87	33.75 ± 3.18	32.91 ± 7.85	40.41 ± 2.99	52.38 ± 13.47	12.1 ± 3.1
20	50.44 ± 2.43	43.60 ± 11.09	31.03 ± 3.53	33.23 ± 9.46	41.24 ± 5.91	47.10 ± 9.81	12.6 ± 6.7
21	50.44 ± 1.60	86.47 ± 3.33	33.17 ± 3.30	32.83 ± 9.55	36.88 ± 2.16	51.74 ± 11.96	12.9 ± 4.8
22	50.55 ± 1.53	47.73 ± 12.35	31.25 ± 3.17	33.80 ± 8.50	41.41 ± 2.93	56.99 ± 17.24	13.6 ± 6.2
23	49.94 ± 1.73	78.86 ± 11.33	30.21 ± 3.23	30.98 ± 8.50	37.66 ± 2.25	53.66 ± 17.03	13.7 ± 5.5
24	50.38 ± 1.85	84.38 ± 3.44	32.47 ± 2.78	30.32 ± 7.10	41.41 ± 2.01	54.10 ± 10.67	14.8 ± 4.5
25	50.39 ± 2.46	54.41 ± 7.52	31.45 ± 2.30	28.26 ± 10.83	38.52 ± 2.97	48.39 ± 16.99	15.2 ± 4.6
26	51.49 ± 2.11	37.38 ± 10.27	33.00 ± 3.16	33.79 ± 9.34	38.89 ± 2.84	50.28 ± 12.57	15.2 ± 7.4
27	49.38 ± 1.47	86.21 ± 3.27	31.03 ± 2.86	30.07 ± 9.33	39.09 ± 2.25	53.58 ± 10.40	15.4 ± 4.3
28	49.41 ± 1.65	85.04 ± 2.62	31.93 ± 3.38	28.48 ± 9.53	39.38 ± 3.06	62.19 ± 9.94	16.1 ± 4.2
29	49.34 ± 2.46	87.47 ± 2.95	31.40 ± 3.87	32.44 ± 8.66	39.44 ± 3.20	49.79 ± 8.95	16.9 ± 5.2
30	50.90 ± 2.13	38.99 ± 11.86	30.45 ± 5.45	28.73 ± 10.11	37.29 ± 4.80	48.88 ± 9.61	17.4 ± 5.2

Table S3, individual data about the achenes characteristics

CV	Environment	Prot	Oil%	OA	Yield	Bulk density	TSW	EH
1	2021Azay	33.9	53.9	61.0	31.3	40.8	45.2	6.6%
2	2021Azay	35.5	54.5	42.8	35.4	41.0	54.3	6.3%
3	2021Azay	37.3	51.4	85.8	35.5	40.8	45.9	8.1%
4	2021Azay	34.6	55.8	27.9	28.8	42.2	37.1	2.9%
5	2021Azay	32.4	50.5	42.8	33.6	45.0	50.2	4.4%
6	2021Azay	31.2	52.8	40.9	31.3	44.9	41.9	4.9%
7	2021Azay	30.7	52.9	31.7	24.6	39.0	45.2	7.8%
8	2021Azay	30.8	50.6	85.2	25.8	40.7	45.4	10.1%
9	2021Azay	31.1	53.4	85.6	31.8	42.8	51.5	4.9%
10	2021Azay	35.1	51.3	85.4	31.9	43.3	58.8	6.3%
11	2021Azay	33.0	51.3	67.0	22.9	42.3	48.3	4.8%
12	2021Azay	34.8	51.5	34.0	31.8	43.5	46.5	7.3%
13	2021Azay	29.6	52.8	35.8	35.4	42.0	41.0	9.8%
14	2021Azay	32.5	54.7	41.0	31.0	42.4	49.5	6.7%
15	2021Azay	32.1	49.6	81.4	27.2	41.0	48.4	11.2%
16	2021Azay	33.9	54.2	29.3	39.2	43.2	54.5	8.3%
17	2021Azay	36.0	51.6	84.8	32.5	42.9	47.8	7.2%
18	2021Azay	36.3	51.2	41.2	23.9	41.8	48.9	12.7%
19	2021Azay	32.1	52.0	42.5	33.8	42.0	50.6	10.6%
20	2021Azay	29.6	52.7	34.1	38.4	46.2	46.2	5.9%
21	2021Azay	34.2	49.0	84.3	29.6	36.5	45.3	11.8%
22	2021Azay	30.5	51.4	46.4	34.8	44.7	54.3	10.1%
23	2021Azay	31.3	50.7	73.4	29.7	38.7	42.8	14.2%
24	2021Azay	32.3	52.0	79.6	29.3	42.9	53.5	14.0%
25	2021Azay	32.3	51.5	46.6	31.7	38.6	46.0	14.8%
26	2021Azay	33.6	52.4	29.7	35.2	42.2	46.4	8.3%
27	2021Azay	30.6	50.0	84.8	29.5	41.2	46.4	14.4%
28	2021Azay	29.1	49.3	80.1	28.1	41.7	56.7	14.5%
29	2021Azay	32.2	50.9	87.7	32.3	41.3	46.4	13.7%
30	2021Azay	28.9	52.5	30.6	33.4	41.6	52.0	16.7%
1	2021Cham	38.4	52.6	89.6	39.4	44.0	78.2	3.3%
2	2021Cham	34.8	54.1	55.6	42.8	41.6	62.6	4.1%
3	2021Cham	41.3	51.6	90.9	43.6	40.6	59.3	4.0%
4	2021Cham	35.0	55.1	40.9	39.1	45.3	76.9	3.0%
5	2021Cham	36.6	51.0	43.3	43.2	38.6	63.8	8.5%
6	2021Cham	38.3	52.0	50.4	32.5	45.2	81.5	9.0%
7	2021Cham	35.0	56.2	37.2	39.7	35.8	69.8	5.8%
8	2021Cham	40.5	51.9	86.1	40.7	41.8	71.4	4.1%
9	2021Cham	42.3	51.0	88.7	40.8	44.2	63.8	5.8%
10	2021Cham	44.0	51.5	92.8	37.1	42.8	67.4	7.3%
11	2021Cham	38.0	50.2	88.9	30.0	43.0	66.6	11.0%
12	2021Cham	30.8	53.2	31.1	41.7	40.3	76.1	9.5%
13	2021Cham	35.0	54.2	33.1	46.9	45.6	76.1	5.3%
14	2021Cham	35.2	55.5	45.7	44.5	45.9	56.5	6.2%

CV	Environment	Prot	Oil%	OA	Yield	Bulk density	TSW	EH
15	2021Cham	35.9	48.3	87.7	37.6	42.6	75.9	10.1%
16	2021Cham	34.8	53.4	36.3	42.3	47.3	81.2	9.2%
17	2021Cham	38.8	53.4	92.9	39.3	38.9	98.3	7.0%
18	2021Cham	41.7	50.1	59.8	35.0	41.9	68.0	11.6%
19	2021Cham	36.6			34.8	34.4	77.3	12.1%
20	2021Cham	35.0	51.6	43.1	45.5	28.9	68.4	9.0%
21	2021Cham	30.5	52.4	87.9	44.4	39.7	67.3	9.1%
22	2021Cham	29.5	50.0	50.6	33.5	41.3	92.3	14.7%
23	2021Cham	29.2	50.4	52.8	44.4	39.6	91.9	5.9%
24	2021Cham	34.7	50.8	86.9	38.4	43.2	75.7	13.7%
25	2021Cham	34.2	52.3	51.5	42.3	43.4	84.3	14.4%
26	2021Cham	32.5	52.5	46.1	40.0	41.0	76.5	14.2%
27	2021Cham	34.9	49.2	88.0	38.7	39.2	71.7	16.8%
28	2021Cham	35.6	50.2	87.4	42.4	41.0	77.7	15.8%
29	2021Cham	37.6	51.1	91.5	36.8	42.6	62.5	18.7%
30	2021Cham	30.9	52.0	39.1	39.6	28.4	64.6	11.9%
1	2021Gar	38.7	51.7	84.8	39.8	43.0	56.5	3.5%
2	2021Gar	36.3	53.9	55.1	43.6	44.1	61.1	6.2%
3	2021Gar	39.9	50.4	90.7	41.1	43.9	59.9	2.9%
4	2021Gar	38.3	54.0	48.8	33.4	44.3	55.9	2.8%
5	2021Gar	34.5	49.7	42.7	42.8	46.3	54.0	5.1%
6	2021Gar	37.1	50.6	57.9	37.0	47.7	57.7	4.7%
7	2021Gar	37.7	51.2	46.7	25.2	41.1	50.2	5.7%
8	2021Gar	37.9	49.8	89.1	41.0	44.2	56.8	5.4%
9	2021Gar	37.8	50.5	90.8	40.9	45.9	67.9	5.4%
10	2021Gar	40.6			39.4	44.0	63.4	4.6%
11	2021Gar	32.2	47.6	90.1	19.6	40.1	48.4	7.3%
12	2021Gar	35.0	48.8	58.0	38.8	43.0	58.8	7.7%
13	2021Gar	33.3	51.9	48.2	42.4	44.8	49.8	6.4%
14	2021Gar	40.0	52.5	46.6	31.0	43.1	51.8	6.0%
15	2021Gar	40.9	48.3	86.0	37.1	44.8	56.6	5.2%
16	2021Gar	35.9	53.1	41.2	50.2	44.0	58.5	7.5%
17	2021Gar	38.3	47.4	91.8	29.9	43.4	52.2	11.1%
18	2021Gar	32.1	49.9	48.5	32.5	42.1	59.3	11.8%
19	2021Gar	37.8	50.5	61.0	42.0	44.0	58.1	8.9%
20	2021Gar	34.3	50.2	48.5	21.5	47.4	51.8	5.9%
21	2021Gar	37.2	50.5	86.6	39.7	38.2	58.5	10.4%
22	2021Gar	33.2	50.1	53.1	47.9	45.2	66.6	8.5%
23	2021Gar	33.7	47.8	84.6	32.1	40.4	50.8	10.8%
24	2021Gar	37.6	50.1	88.7	29.8	42.3	57.4	9.9%
25	2021Gar	33.8	47.8	54.8	20.0	39.0	44.7	11.3%
26	2021Gar	34.4	52.5	38.5	44.4	41.5	54.9	9.0%
27	2021Gar	31.6	49.4	85.4	18.1	42.2	55.9	9.0%
28	2021Gar	35.1	48.3	84.9	17.6	43.6	64.8	10.0%
29	2021Gar	33.1	48.4	87.4	40.7	42.6	55.6	11.2%
30	2021Gar	32.3	47.8	49.6	13.6	36.4	45.1	13.2%
1	2021Vill	34.4	56.2	83.6	35.9	42.2	52.1	2.7%

CV	Environment	Prot	Oil%	OA	Yield	Bulk density	TSW	EH
2	2021Vill	31.3	55.8	37.2	40.1	40.8	53.0	3.7%
3	2021Vill	32.1	53.2	86.2	37.1	41.3	48.4	4.0%
4	2021Vill	34.0	57.4	21.7	37.9	43.2	46.4	1.4%
5	2021Vill	30.5	53.4	26.3	44.4	44.8	50.2	4.2%
6	2021Vill	32.0	54.2	34.6	39.5	45.6	51.5	4.8%
7	2021Vill	31.7	55.6	21.2	34.8	42.0	45.1	3.2%
8	2021Vill	30.2	53.8	82.6	30.0	40.8	44.9	4.2%
9	2021Vill	30.8	54.5	82.2	17.6	43.8	60.6	2.9%
10	2021Vill	33.2	53.6	77.8	43.8	43.9	61.4	4.2%
11	2021Vill	27.1	53.2	82.0	37.8	42.8	57.2	4.9%
12	2021Vill	30.4	53.6	18.9	40.3	43.8	55.3	3.9%
13	2021Vill	28.0	55.0	15.0	37.0	42.3	48.9	3.1%
14	2021Vill	30.0	56.7	26.8	38.3	41.4	49.3	6.2%
15	2021Vill	31.1	51.5	79.7	41.4	44.2	51.4	4.5%
16	2021Vill	32.8	54.3	29.7	39.7	42.0	58.2	5.4%
17	2021Vill	30.8	53.2	77.9	45.6	41.3	54.4	7.9%
18	2021Vill	28.4	53.4	36.3	37.4	40.8	58.9	9.9%
19	2021Vill	29.3	54.5	43.5	43.3	43.0	54.0	9.2%
20	2021Vill	25.4	52.5	24.9	40.5	45.2	45.5	6.7%
21	2021Vill	30.6	53.0	89.2	42.6	38.9	53.0	7.9%
22	2021Vill	26.8	51.9	35.7	39.5	43.6	54.7	7.7%
23	2021Vill	28.0	52.0	82.5	38.0	38.4	50.9	10.5%
24	2021Vill	31.3	52.0	79.4	33.8	43.3	54.9	8.0%
25	2021Vill	27.6	53.6	44.1	42.9	39.7	51.7	11.3%
26	2021Vill	29.4	54.1	23.1	40.9	40.6	46.4	8.3%
27	2021Vill	27.4	51.2	79.8	40.8	41.0	56.3	11.8%
28	2021Vill	27.7	51.9	82.7	38.0	41.6	67.8	11.2%
29	2021Vill	26.7	52.9	84.8	39.7	40.6	49.9	10.1%
30	2021Vill	25.3	53.2	17.4	38.1	41.3	51.0	13.2%
1	2022Azay	36.8	53.9	75.6	28.2	38.3	36.2	5.1%
2	2022Azay	33.5	55.5	37.1	24.8	37.4	44.0	8.1%
3	2022Azay	39.1	51.6	88.4	17.3	36.8	42.4	6.9%
4	2022Azay	34.9	52.0	28.3	23.1	37.9	30.1	12.0%
5	2022Azay	33.3	52.6	27.4	24.4	42.6	39.4	6.0%
6	2022Azay	34.6	52.5	23.6	21.0	40.3	37.6	6.5%
7	2022Azay	38.4	52.6	29.5	20.5	37.7	34.9	10.1%
8	2022Azay	37.3	52.7	83.5	25.7	40.0	38.3	5.3%
9	2022Azay	35.5	52.1	80.7	22.7	39.8	42.2	5.8%
10	2022Azay	36.3	51.0	91.1	20.7	36.8	48.4	9.3%
11	2022Azay	34.0	51.7	82.2	23.5	38.7	42.4	9.9%
12	2022Azay	36.0	53.1	38.1	23.6	40.0	42.1	6.9%
13	2022Azay	34.8	52.5	30.9	24.5	39.0	34.4	9.0%
14	2022Azay	36.6	54.3	38.5	23.4	38.5	39.0	11.3%
15	2022Azay	34.7	51.1	88.7	23.0	41.7	44.9	6.9%
16	2022Azay	37.4	53.1	29.1	26.4	38.1	47.0	13.8%
17	2022Azay	37.8	52.4	89.1	27.3	39.6	42.7	10.4%
18	2022Azay	39.0	54.0	45.9	23.5	37.2	41.5	7.2%

CV	Environment	Prot	Oil%	OA	Yield	Bulk density	TSW	EH
19	2022Azay	34.4	53.4	44.3	28.6	39.0	39.0	11.6%
20	2022Azay	33.1	52.4	41.7	23.8	41.1	41.4	12.6%
21	2022Azay	31.4	50.7	81.4	23.8	35.9	38.4	11.2%
22	2022Azay	32.9	53.4	30.8	24.7	39.1	38.8	7.9%
23	2022Azay	32.7	51.1	85.3	19.7	37.6	39.0	9.1%
24	2022Azay	30.7	51.7	85.9	18.7	38.3	41.8	15.8%
25	2022Azay	31.6	51.0	52.2	22.6	39.6	31.2	8.9%
26	2022Azay	33.3	51.8	30.9	22.7	37.7	41.1	16.5%
27	2022Azay	32.5	50.6	85.7	23.8	37.8	50.6	13.5%
28	2022Azay	32.7	50.0	85.4	20.5	38.1	58.8	17.1%
29	2022Azay	32.4	49.2	82.2	23.8	38.1	39.7	15.0%
30	2022Azay	32.7	52.7	41.5	22.9	39.4	38.5	14.1%
1	2022Cham	33.8	53.6	88.5	16.1	34.7	58.0	10.0%
2	2022Cham	35.1	55.3	48.0	36.4	41.3	60.0	10.8%
3	2022Cham	33.5	52.1	91.0	34.2	40.4	60.0	10.7%
4	2022Cham	34.5	53.6	44.5	39.5	34.5	54.0	13.8%
5	2022Cham	32.0	52.0	59.7	35.5	40.2	58.0	12.1%
6	2022Cham	33.7	52.3	51.8	37.2	42.3	60.0	14.4%
7	2022Cham	35.1	54.4	29.3	35.0	39.0	52.0	12.8%
8	2022Cham	35.6	52.2	92.6	36.6	40.3	56.0	12.5%
9	2022Cham	37.9	51.8	89.0	33.2	38.0	74.0	12.1%
10	2022Cham	36.7	50.3	97.1	32.2	37.3	72.0	17.2%
11	2022Cham	29.5	51.8	87.1	31.9	40.7	58.0	14.8%
12	2022Cham	30.9	50.7	46.7	34.8	36.0	62.0	17.6%
13	2022Cham	29.8	51.8	48.5	37.4	40.6	52.0	14.9%
14	2022Cham	33.1	53.5	43.9	35.5	36.8	60.0	19.3%
15	2022Cham	33.3	48.9	83.3	31.3	39.9	56.0	16.7%
16	2022Cham	32.8	51.8	57.1	34.7	37.0	64.0	16.3%
17	2022Cham	34.4	50.4	101.9	32.7	31.1	58.0	18.6%
18	2022Cham	31.8	52.6	62.1	38.7	38.3	58.0	17.9%
19	2022Cham	32.3	52.5	68.7	32.9	39.4	60.0	18.1%
20	2022Cham	31.5	50.2	56.8	36.9	40.2	46.0	21.2%
21	2022Cham	33.0	50.3	87.8	35.1	34.1	64.0	19.5%
22	2022Cham	31.3	49.5	50.5	35.3	39.1	62.0	23.9%
23	2022Cham	26.1	51.2	87.5	31.3	37.4	62.0	20.3%
24	2022Cham	31.4	50.7	83.4	36.0	42.4	58.0	20.9%
25	2022Cham	30.9	51.1	59.8	17.4	38.2	54.0	20.0%
26	2022Cham	35.2	51.8	44.1	36.0	36.1	56.0	26.0%
27	2022Cham	28.1	49.7	91.1	33.0	38.0	62.0	22.1%
28	2022Cham	29.8	50.5	88.1	30.1	35.1	70.0	20.1%
29	2022Cham	30.4	48.9	89.9	35.1	39.3	58.0	23.2%
30	2022Cham	29.8	51.6	41.1	32.3	42.4	58.0	21.7%
1	2022Gail	39.2	48.7	80.6	14.0	39.1	31.0	8.5%
2	2022Gail	42.4	51.6	58.9	17.0	37.6	38.3	7.7%
3	2022Gail	38.0	46.5	89.7	16.4	36.5	33.0	9.3%
4	2022Gail	35.5	47.3	59.2	17.3	33.9	30.8	13.5%
5	2022Gail	35.0	46.9	58.5	18.6	39.2	34.5	9.7%

CV	Environment	Prot	Oil%	OA	Yield	Bulk density	TSW	EH
6	2022Gail	38.0	49.0	57.2	18.2	31.8	36.6	8.3%
7	2022Gail	41.4	48.3	52.1	17.1	36.8	30.5	10.3%
8	2022Gail	38.5	46.8	84.6	17.4	38.1	37.4	11.7%
9	2022Gail		47.6	91.3	18.7	37.4	40.8	14.0%
10	2022Gail	43.0	46.3	91.8	15.3	34.1	38.6	12.7%
11	2022Gail	35.9	44.1	84.7	13.9	34.1	35.1	13.9%
12	2022Gail	37.9	48.9	56.5	16.8	36.8	40.4	9.4%
13	2022Gail	37.9	46.1	54.2	15.8	35.2	30.8	12.5%
14	2022Gail	35.1	48.3	55.9	16.8	37.4	33.5	10.8%
15	2022Gail	40.1	46.0	88.8	16.1	36.8	38.0	11.6%
16	2022Gail	38.2	48.3	55.6	19.3	33.0	40.8	14.3%
17	2022Gail	41.2	46.8	88.4	17.1	39.1	35.3	13.2%
18	2022Gail	40.5	49.6	57.3	17.9	36.8	36.8	9.8%
19	2022Gail	37.0	48.1	74.4	18.6	40.0	34.1	11.4%
20	2022Gail	32.8	46.0	58.2	21.6	38.1	35.5	18.0%
21	2022Gail	38.7	48.7	91.4	16.7	33.9	33.4	12.6%
22	2022Gail	37.1	48.8	71.6	20.2	37.0	41.2	14.4%
23	2022Gail	34.2	47.1	81.8	19.1	33.3	41.9	18.1%
24	2022Gail	33.5	46.4	84.3	21.3	39.6	43.5	15.5%
25	2022Gail	32.5	46.0	67.1	15.8	32.8	29.2	19.4%
26	2022Gail	37.7	47.3	54.3	17.1	34.4	35.0	13.1%
27	2022Gail	34.5	46.2	87.6	17.8	35.5	37.7	15.0%
28	2022Gail	36.2	46.3	86.8	17.0	35.7	45.7	17.3%
29	2022Gail	33.5	44.6	89.3	15.4	32.9	36.2	20.0%
30	2022Gail	41.0	48.5	56.8	15.4	33.9	35.8	22.2%
1	2022Lev	31.7	52.8	87.2	32.3	40.3	46.0	9.1%
2	2022Lev	33.2	53.9	42.0	34.7	39.5	44.0	10.7%
3	2022Lev	32.9	49.2	88.8	31.3	36.9	42.0	12.9%
4	2022Lev	33.1	52.1	30.7	29.5	39.3	34.0	11.7%
5	2022Lev	35.0	49.1	54.3	23.3	42.1	46.0	13.5%
6	2022Lev	26.5	50.7	37.9	36.9	45.6	42.0	11.1%
7	2022Lev	32.2	53.7	28.3	33.6	43.2	46.0	8.9%
8	2022Lev	32.1	51.8	88.5	32.2	39.1	54.0	12.6%
9	2022Lev	31.5	50.8	88.7	32.5	37.2	52.0	16.7%
10	2022Lev	36.8	50.7	80.6	34.7	35.0	54.0	8.7%
11	2022Lev	27.6	50.5	87.8	34.0	38.9	52.0	13.5%
12	2022Lev	31.7	49.4	37.9	37.3	40.8	52.0	18.9%
13	2022Lev	28.6	50.0	39.0	36.2	41.5	36.0	23.6%
14	2022Lev	33.1	50.9	47.2	33.5	40.0	48.0	19.2%
15	2022Lev	34.2	47.7	86.5	31.0	40.3	52.0	20.9%
16	2022Lev	32.0	51.2	51.4	28.1	37.7	50.0	15.6%
17	2022Lev	31.1	51.5	99.6	30.1	37.6	44.0	15.1%
18	2022Lev	27.9	50.9	44.6	36.0	37.5	50.0	14.2%
19	2022Lev	30.5	50.3	75.3	29.4	41.5	46.0	15.1%
20	2022Lev	26.7	47.9	41.6	37.7	42.9	42.0	21.3%
21	2022Lev	29.7	48.9	83.1	30.6	37.9	54.0	20.9%
22	2022Lev	28.8	49.4	43.2	34.7	41.3	46.0	21.3%

CV	Environment	Prot	Oil%	OA	Yield	Bulk density	TSW	EH
23	2022Lev	26.5	49.3	83.1	33.6	35.9	50.0	20.9%
24	2022Lev	28.4	49.4	87.0	35.4	39.3	48.0	20.6%
25	2022Lev	28.9	49.8	59.3	33.5	36.9	46.0	21.1%
26	2022Lev	27.8	49.6	32.4	33.9	37.7	46.0	26.4%
27	2022Lev	28.6	48.9	87.3	38.9	37.9	48.0	20.5%
28	2022Lev	29.3	48.8	84.9	34.2	38.3	56.0	22.4%
29	2022Lev	25.5	48.7	87.2	35.7	38.2	50.0	23.6%
30	2022Lev	22.8	49.1	35.8	34.6	35.0	46.0	25.9%

