

**General information**

Remover name	Arts Agri V.O.F.		
Project code	PARL001		
Project name	Paulownia Fam Arts Rosékalverhouderij		
Location	Haps, The Netherlands		
Area	1.50	ha	
Starting year	2025		
Duration	10	years	project duration
Biodiversity holding	0%		between fruit tree species planted
Holding pool	20%		freed up when measurements confirm projection pathways
Project emissions	20%		LCA estimate, or specified when >20%

**Per hectare**

Baseline TEC	235	tCO2/ha	Soil Organic Carbon and Above Ground Carbon, following CDM AR-ACM0003
Reference capacity	570	tCO2/ha	Using CEDA and Soil sample data
Storage potential	336	tCO2/ha	Projection -/- baseline

**Per project**

Projected storage	503	tCO2	storage potential per ha x area x storage duration 100 year equivalent
LCA emissions	101	tCO2	project related emissions
Net storage potential	403	tCO2	project storage -/- emissions over 20 years

**Potential Carbon Removal Units**

Units first 10 years	201	units	10/20 x net storage potential
Holding Pool	40	units	20% of the first 12 years
Biodiversity holding pool	0	units	
Potential units issued	161	units	

<b>Field Code</b>	<b>Field name</b>	<b>Size (ha)</b>	<b>Owner</b>	
<b>A</b>	385 Dorsheseweg	1.5	Fruitteelt E.H.M. Schrama	
<b>B</b>				







Sources								
value	source	URL	Notes					
CEDA aboveground biomass carbon	<a href="https://climatee">https://climatee</a>	<a href="https://datacedaa">https://datacedaa</a>	2018 data					
SOC	A critical review of the conventional SOC to SOM conversion factor (Geoderma, Volume 156, Issues 3–4, 15 May 2010, Pages 75-83 )							
Density	Wageningen U	<a href="https://edepot.wu">https://edepot.wu</a>	We've added these soil density levels to the calculation factors tab					
Reference data for capacity								
SOC (soil)	350	tCO2/ha	estimation based on <a href="https://esdac.jrc.ec.europa.eu/content/pan-european-soc-stock-agricultural-soils">https://esdac.jrc.ec.europa.eu/content/pan-european-soc-stock-agricultural-soils</a>					
AGB (above ground)	220	tCO2e/ha						
CALCULATION								
Tree species	Shantong Paul	Paulownia cultures						
Trees total number planted	1,200	paulownia trees						
Trees per hectare	800	trees/ha						
Damage percentage	1%	trees/y	corrected for replant (2% - 1% = 1%)		<a href="https://link.springer.com/article/10.1007/s11676-019-01021-9">https://link.springer.com/article/10.1007/s11676-019-01021-9</a>			
<b>Regrowth after harvest</b>	<b>29.4%</b>	trees/y	assuming a regrowth in 5 years of 80%					
Time first harvest	10.000	y						
Time successive harvests	8.000	y						
Harvest per harvest year	100%	trees/ha						
Wood volume per tree	1.0	m3						
Density dry	275	kg/m3	<a href="https://www.researchgate.net/publication/360278806_The_Influence_of_Age_on_the_Wood_Properties_of_Paulownia_tomentosa_Thunb_Steud">https://www.researchgate.net/publication/360278806_The_Influence_of_Age_on_the_Wood_Properties_of_Paulownia_tomentosa_Thunb_Steud</a>					
CO2 stock trees 10 years	220.38	tCO2/ha	AGB and BGB					
AGB and BGB CO2 stock	y	#trees trees/ha	vol/tree m3 m3	vol/ha m3/ha	% in roots/tops %	dry matter tons	CO2 stock tCO2/ha	
	2,025	1	800	0.000	0	30%	0.00	0.00
	2,026	2	792	0.02	16	30%	5.66	10.38
	2,027	3	784	0.05	39	30%	14.02	25.69
	2,028	4	776	0.09	70	30%	24.98	45.79
	2,029	5	768	0.18	138	30%	49.45	90.66
	2,030	6	761	0.35	266	30%	95.19	174.52
	2,031	7	753	0.50	377	30%	134.63	246.82
	2,032	8	746	0.65	485	30%	173.27	317.66
	2,033	9	738	0.75	554	30%	197.93	362.87
	2,034	10	0	0.85	0	30%	0.00	0.00
	2,035	11	217	0.90	195	30%	69.78	127.93
	2,036	12	278	0.95	265	30%	94.56	173.37
	2,037	13	357	1.00	357	30%	127.79	234.28
	2,038	14	459	1.05	482	30%	172.26	315.81
	2,039	15	454	1.10	500	30%	178.66	327.54
	2,040	16	0	1.15	0	30%	0.00	0.00
	2,041	17	133	1.20	160	30%	57.26	104.98
	2,042	18	171	1.25	214	30%	76.57	140.39
	2,043	19	220	1.30	286	30%	102.24	187.44
	2,044	20	282	1.35	381	30%	136.30	249.89

from C to CO2	368866667	% organic	soil density
1.59	0.5	0.25	1.59
1.583	0.6	0.3	1.583
1.576	0.7	0.35	1.576
1.569	0.8	0.4	1.569
1.562	0.9	0.45	1.562
1.555	1	0.5	1.555
1.548	1.1	0.55	1.548
1.541	1.2	0.6	1.541
1.534	1.3	0.65	1.534
1.527	1.4	0.7	1.527
1.52	1.5	0.75	1.52
1.513	1.6	0.8	1.513
1.506	1.7	0.85	1.506
1.499	1.8	0.9	1.499
1.492	1.9	0.95	1.492
1.485	2	1	1.485
1.478	2.1	1.05	1.478
1.471	2.2	1.1	1.471
1.464	2.3	1.15	1.464
1.457	2.4	1.2	1.457
1.45	2.5	1.25	1.45
1.444	2.6	1.3	1.444
1.438	2.7	1.35	1.438
1.432	2.8	1.4	1.432
1.426	2.9	1.45	1.426
1.42	3	1.5	1.42
1.414	3.1	1.55	1.414
1.408	3.2	1.6	1.408
1.402	3.3	1.65	1.402
1.396	3.4	1.7	1.396
1.39	3.5	1.75	1.39
1.385	3.6	1.8	1.385
1.38	3.7	1.85	1.38
1.375	3.8	1.9	1.375
1.37	3.9	1.95	1.37
1.365	4	2	1.365
1.36	4.1	2.05	1.36
1.355	4.2	2.1	1.355
1.35	4.3	2.15	1.35
1.345	4.4	2.2	1.345
1.34	4.5	2.25	1.34
1.335	4.6	2.3	1.335
1.33	4.7	2.35	1.33
1.325	4.8	2.4	1.325
1.32	4.9	2.45	1.32
1.315	5	2.5	1.315
1.31	5.1	2.55	1.31
1.305	5.2	2.6	1.305
1.3	5.3	2.65	1.3
1.295	5.4	2.7	1.295
1.29	5.5	2.75	1.29
1.285	5.6	2.8	1.285
1.28	5.7	2.85	1.28
1.275	5.8	2.9	1.275
1.27	5.9	2.95	1.27
1.265	6	3	1.265
1.26	6.1	3.05	1.26
1.255	6.2	3.1	1.255
1.25	6.3	3.15	1.25
1.245	6.4	3.2	1.245
1.24	6.5	3.25	1.24
1.234	6.6	3.3	1.234
1.228	6.7	3.35	1.228
1.222	6.8	3.4	1.222
1.216	6.9	3.45	1.216
1.21	7	3.5	1.21
1.204	7.1	3.55	1.204
1.198	7.2	3.6	1.198
1.192	7.3	3.65	1.192
1.186	7.4	3.7	1.186
1.18	7.5	3.75	1.18
1.175	7.6	3.8	1.175
1.17	7.7	3.85	1.17
1.165	7.8	3.9	1.165
1.16	7.9	3.95	1.16
1.155	8	4	1.155
1.15	8.1	4.05	1.15
1.145	8.2	4.1	1.145
1.14	8.3	4.15	1.14
1.135	8.4	4.2	1.135
1.13	8.5	4.25	1.13
1.126	8.6	4.3	1.126
1.122	8.7	4.35	1.122
1.118	8.8	4.4	1.118
1.114	8.9	4.45	1.114
1.11	9	4.5	1.11
1.106	9.1	4.55	1.106
1.102	9.2	4.6	1.102
1.098	9.3	4.65	1.098
1.094	9.4	4.7	1.094
1.09	9.5	4.75	1.09
1.086	9.6	4.8	1.086
1.082	9.7	4.85	1.082
1.078	9.8	4.9	1.078
1.074	9.9	4.95	1.074
1.07	10	5	1.07
1.066	10.1	5.05	1.066
1.062	10.2	5.1	1.062
1.058	10.3	5.15	1.058
1.054	10.4	5.2	1.054
1.05	10.5	5.25	1.05
1.046	10.6	5.3	1.046
1.042	10.7	5.35	1.042
1.038	10.8	5.4	1.038
1.034	10.9	5.45	1.034
1.03	11	5.5	1.03
1.026	11.1	5.55	1.026
1.022	11.2	5.6	1.022
1.018	11.3	5.65	1.018
1.014	11.4	5.7	1.014
1.01	11.5	5.75	1.01
1.005	11.6	5.8	1.005
1	11.7	5.85	1
0.995	11.8	5.9	0.995
0.99	11.9	5.95	0.99
0.985	12	6	0.985
0.98	12.1	6.05	0.98
0.975	12.2	6.1	0.975
0.97	12.3	6.15	0.97
0.965	12.4	6.2	0.965
0.96	12.5	6.25	0.96
0.957	12.6	6.3	0.957
0.954	12.7	6.35	0.954
0.951	12.8	6.4	0.951
0.948	12.9	6.45	0.948
0.945	13	6.5	0.945
0.942	13.1	6.55	0.942
0.939	13.2	6.6	0.939
0.936	13.3	6.65	0.936
0.933	13.4	6.7	0.933
0.93	13.5	6.75	0.93
0.927	13.6	6.8	0.927
0.924	13.7	6.85	0.924
0.921	13.8	6.9	0.921
0.918	13.9	6.95	0.918
0.915	14	7	0.915
0.912	14.1	7.05	0.912
0.909	14.2	7.1	0.909
0.906	14.3	7.15	0.906
0.903	14.4	7.2	0.903
0.9	14.5	7.25	0.9
0.897	14.6	7.3	0.897
0.894	14.7	7.35	0.894
0.891	14.8	7.4	0.891
0.888	14.9	7.45	0.888
0.885	15	7.5	0.885
0.882	15.1	7.55	0.882
0.879	15.2	7.6	0.879
0.876	15.3	7.65	0.876
0.873	15.4	7.7	0.873
0.87	15.5	7.75	0.87
0.867	15.6	7.8	0.867
0.864	15.7	7.85	0.864
0.861	15.8	7.9	0.861
0.858	15.9	7.95	0.858
0.855	16	8	0.855
0.852	16.1	8.05	0.852
0.849	16.2	8.1	0.849
0.846	16.3	8.15	0.846
0.843	16.4	8.2	0.843
0.84	16.5	8.25	0.84
0.837	16.6	8.3	0.837
0.834	16.7	8.35	0.834
0.831	16.8	8.4	0.831
0.828	16.9	8.45	0.828
0.825	17	8.5	0.825



0.496	41.8	20.9	0.496
0.495	41	21	0.495
0.494	42.2	21.1	0.494
0.493	42.4	21.2	0.493
0.492	42.5	21.3	0.492
0.491	42.8	21.4	0.491
0.49	43	21.5	0.49
0.488	43.2	21.6	0.488
0.486	43.4	21.7	0.486
0.484	43.6	21.8	0.484
0.482	43.8	21.9	0.482
0.48	44	22	0.48
0.478	44.2	22.1	0.478
0.476	44.4	22.2	0.476
0.474	44.6	22.3	0.474
0.472	44.8	22.4	0.472
0.47	45	22.5	0.47
0.469	45.2	22.6	0.469
0.468	45.4	22.7	0.468
0.467	45.6	22.8	0.467
0.466	45.8	22.9	0.466
0.465	46	23	0.465
0.464	46.2	23.1	0.464
0.463	46.4	23.2	0.463
0.462	46.6	23.3	0.462
0.461	46.8	23.4	0.461
0.46	47	23.5	0.46
0.458	47.2	23.6	0.458
0.456	47.4	23.7	0.456
0.454	47.6	23.8	0.454
0.452	47.8	23.9	0.452
0.45	48	24	0.45
0.448	48.2	24.1	0.448
0.446	48.4	24.2	0.446
0.444	48.6	24.3	0.444
0.442	48.8	24.4	0.442
0.44	49	24.5	0.44

