Supplementary Material

Tab. S1 - Crossing design and number of families in the low-density trial (833 stems/ha). This plan includes 5 to 45 individuals per family, i.e. an average of 18 individuals per family.

		E. urophylla												
		14-109	14-142	14-144	14-230	14-233	14-242	14-289	14-33	14-63	14-73	14-74	14-76	14-82
E. grandis	9-111	10		27	13		13	16			28	12	14	12
	9-115	15	31	9	24			13		30		26		
	9-118											30	16	
	9-15	25	14		7					35			7	
	9-159	5			13								11	
	9-21	21	7	30	25	9	17	34	13	18	25		26	28
	9-29	8		11	9				16				17	10
	9-66	6	21		29		8	15	6	43	26	45	11	12

Tab. S2 - Crossing design and number of families in the high-density trial (2500 stems/ha). This plan includes 6 to 43 individuals per family, i.e. an average of 27 individuals per family.

		E. urophylla												
		14-109	14-142	14-144	14-230	14-233	14-242	14-289	14-33	14-63	14-73	14-74	14-76	14-82
E. grandis	9-111	27		27	24		26	39			34	32	30	35
	9-115	34	34	29	35			12		38		35		
	9-118											33	28	
	9-15	32	28		6					41			34	
	9-159	16			12								13	
	9-21	23	15	26	29	8	26	35	30	27	29		43	34
	9-29	30		21	26				17				31	9
	9-66	17	29		39		21	28	7	32	28	36	34	37

Tab. S3 - Crossing design and number of families in the two trials (833 and 2500 stems/ha). This plan includes 13 to 81 individuals per family, i.e. an average of 46 individuals per family.

		E. urophylla												
		14-109	14-142	14-144	14-230	14-233	14-242	14-289	14-33	14-63	14-73	14-74	14-76	14-82
E. grandis	9-111	37		54	37		39	55			62	44	44	47
	9-115	49	65	38	59			25		68		61		
	9-118											63	44	
	9-15	57	42		13					76			41	
	9-159	21			25								24	
	9-21	44	22	56	54	17	43	69	43	45	54		69	62
	9-29	38		32	35				33				48	19
	9-66	23	50		68		29	43	13	75	54	81	45	49

Tab. S4 - Lin's Pi index by family for all traits (in green: families with the lowest indices, in orange: families with the highest indices).

Famille	P_i_HT	P_i_C	P_i_EXT	P_i_LIGN	P_i_CEL	P_i_SG	Famille	P_i_HT	P_i_C	P_i_EXT	P_i_LIGN	P_i_CEL	P_i_SG
F1	15.11	121.13	1.94	2.18	2.21	1.70	**F43**	6.45	61.35	5.77	1.53	0.14	2.00
F10	3.19	14.54	0.58	11.54	26.83	0.04	**F47**	10.01	58.57	5.46	10.01	3.81	0.71
F100	7.53	80.82	3.99	3.72	7.83	0.64	**F48**	16.60	125.24	5.20	9.12	8.42	0.43
F101	11.04	102.36	1.28	6.52	7.53	1.12	**F50**	18.97	80.79	5.12	8.00	8.43	0.40
F11	19.44	154.99	3.15	1.71	11.39	0.88	**F52**	4.08	33.92	4.83	5.23	3.24	1.40
F12	7.26	117.77	2.83	4.73	4.04	1.02	**F57**	2.09	6.41	3.43	3.53	4.19	1.27
F13	16.13	115.57	2.50	11.42	6.43	0.41	**F58**	14.55	112.90	3.63	14.20	3.69	0.60
F14	16.49	136.72	1.39	6.62	5.74	0.70	**F59**	36.17	209.35	2.85	5.56	5.97	0.93
F15	10.76	97.38	4.95	3.60	5.65	0.52	**F60**	22.49	170.80	2.95	5.42	10.18	0.49
F16	16.17	96.65	3.60	3.87	4.92	0.76	**F61**	46.02	205.73	1.32	4.22	14.77	0.61
F18	9.46	52.71	1.17	0.41	9.16	2.07	**F62**	12.35	88.92	2.18	2.60	6.32	1.57
F19	26.35	168.61	2.81	3.78	2.88	1.57	**F63**	75.27	381.36	1.06	12.96	13.41	0.39
F2	13.13	99.51	2.99	9.59	3.99	0.62	**F64**	12.47	59.44	1.68	30.20	4.02	0.29
F22	5.27	45.65	1.08	12.83	7.30	0.59	**F7**	18.65	112.62	1.18	7.29	5.66	1.00
F23	3.47	53.75	1.42	8.58	8.82	0.62	**F70**	0.72	21.00	7.23	12.13	15.38	0.06
F24	15.00	173.19	2.31	6.17	4.71	0.94	**F72**	1.10	6.88	7.08	0.74	6.11	1.37
F25	6.97	54.34	3.75	3.22	5.63	1.39	**F73**	3.74	62.72	1.51	8.12	14.56	0.32
F28	19.63	135.48	2.80	18.65	3.76	0.28	**F80**	13.25	88.48	2.06	13.89	12.91	0.15
F29	3.92	37.16	2.55	19.70	3.00	0.41	**F82**	36.08	185.01	1.87	5.78	21.45	0.12
F30	24.25	161.99	3.93	19.01	5.49	0.68	**F83**	30.43	166.94	6.27	8.53	14.55	0.04
F31	25.42	130.07	2.51	9.43	5.46	0.58	**F85**	11.56	47.72	4.98	5.45	2.01	1.08
F32	7.07	34.76	3.07	13.30	4.99	0.53	**F88**	8.24	87.98	4.64	8.47	6.89	0.48
F34	24.57	141.26	3.05	10.13	1.59	1.32	**F89**	20.23	164.92	2.76	6.82	13.32	0.46
F36	31.50	171.23	3.29	9.20	6.92	0.36	**F90**	16.24	46.82	7.05	2.06	13.01	0.46
F37	2.34	23.48	9.93	3.71	1.06	0.83	**F94**	14.91	84.98	0.07	15.60	19.95	0.20
F38	9.06	40.87	2.65	7.46	7.43	0.20	**F96**	29.51	159.70	0.60	1.18	8.10	1.25
F4	17.08	128.61	2.69	4.47	9.44	0.65	**F97**	43.64	213.83	0.12	6.87	20.86	0.75
F40	13.25	74.31	3.81	2.43	8.32	0.73							

Tab. S5 - Ranking of families according to their Pi index for all traits.

Famille	P_i_HTRang	P_i_CRang	P_i_EXTRang	P_i_LIGNRang	P_i_CELRang	P_i_SGRang	Somme des rangs des P_i	Famille	P_i_HTRang	P_i_CRang	P_i_EXTRang	P_i_LIGNRang	P_i_CELRang	P_i_SGRang	Somme des rangs des P_i
F1	30	35	16	7	5	47	140	**F43**	11	18	50	4	1	48	132
F10	5	3	3	44	55	1	111	**F47**	19	16	49	41	11	28	164
F100	15	22	42	14	34	24	151	**F48**	35	36	48	37	37	13	206
F101	21	30	9	26	33	39	158	**F50**	38	21	47	32	38	11	187
F11	39	42	34	5	43	33	196	**F52**	9	6	44	20	8	45	132
F12	14	34	28	19	14	37	146	**F57**	3	1	36	11	15	41	107
F13	31	33	20	43	28	12	167	**F58**	27	32	38	50	9	21	177
F14	34	40	11	27	24	27	163	**F59**	51	53	29	23	25	34	215
F15	20	28	45	12	22	17	144	**F60**	42	48	30	21	42	16	199
F16	32	27	37	16	17	31	160	**F61**	53	52	10	17	50	22	204
F18	18	13	7	1	40	49	128	**F62**	23	26	18	9	27	46	149
F19	46	47	27	15	6	46	187	**F63**	54	55	5	47	47	10	218
F2	25	29	31	40	12	23	160	**F64**	24	17	14	55	13	7	130
F22	10	10	6	46	31	20	123	**F7**	37	31	8	30	23	36	165
F23	6	14	12	36	39	23	130	**F70**	1	4	54	45	51	2	157
F24	29	50	19	25	16	35	174	**F72**	2	2	53	2	26	43	128
F25	12	15	39	10	21	44	141	**F73**	7	19	13	33	49	8	129
F28	40	39	26	52	10	6	173	**F80**	26	25	17	49	44	4	165
F29	8	8	22	54	7	12	111	**F82**	50	51	15	24	54	3	197
F30	43	44	41	53	20	26	227	**F83**	48	46	51	35	48	1	229
F31	45	38	21	39	19	19	181	**F85**	22	12	46	22	4	38	144
F32	13	7	33	48	18	18	137	**F88**	16	24	43	34	29	15	161
F34	44	41	32	42	3	42	204	**F89**	41	45	25	28	46	14	199
F36	49	49	35	38	30	9	210	**F90**	33	11	52	6	45	14	161
F37	4	5	55	13	2	32	111	**F94**	28	23	1	51	52	5	160
F38	17	9	23	31	32	5	117	**F96**	47	43	4	3	35	40	172
F4	36	37	24	18	41	25	181	**F97**	52	54	2	29	53	30	220
F40	26	20	40	8	36	29	159								