Supplementary Table S1. ANOVA table for comparison of biomass yields by clone and shoot age at harvest (Type III table with Satterthwaite's method)

	Sum Sq.	Mean Sq.	Num. DF	Den. DF	F value	P value
Block	14.48	7.24	2	4	3.18	0.15
Shoot Age	22.78	11.39	2	4	5.00	0.08
Clone	162.59	32.52	5	30	14.29	3.5×10^{-7}
Shoot age:Clone	10.70	1.07	10	30	0.47	0.90

Supplementary Table S2. Estimated marginal means (EM means) of biomass yields by clone and shoot age. Yields are compared within shoot ages at the significance level of $\alpha = 0.05$, with clones sharing the same letter (compact letter display, CLD) not being significantly different from each other. Standard error for all measurements was 0.892 ton ha^{-1} y^{-1}

Clone^{CLD}	EM mean (ton ha^{-1} y^{-1})	95% CI
Shoot age = 1		
78195^{C}	2.58	0.76–4.39
78183^{CB}	3.30	1.48–5.12
Jorr^{CB}	3.70	1.88–5.52
Björn^{CBA}	6.13	4.31–7.95
Olof^{BA}	6.37	4.55–8.19
Tora^{A}	8.50	6.68–10.32
Shoot age = 2		
78195^{A}	2.52	0.70–4.34
Jorr^{A}	3.50	1.68–5.32
78183^{A}	4.21	2.39–6.03
Olof ^{A}	5.68	3.86–7.49
Tora ^{A}	6.06	4.24–7.88
Björn ^{A}	6.20	4.38–8.02
Shoot age = 3		
78195^{B}	3.59	1.77–5.41
Jorr^{BA}	5.23	3.40–7.05
78183^{BA}	5.27	3.46–7.09
Olof^{A}	7.53	5.70–9.34
Björn^{A}	8.27	6.46–10.09
Tora^{A}	8.66	6.85–10.48

Supplementary Table S3. ANOVA table for comparison of biomethanation potential by clone and shoot age

	D.F.	Sum Sq.	Mean Sq.	F value	P value
Clone	5	2583.7	516.73	2.7592	0.03
Shoot Age	2	6277.3	3138.63	16.7594	3.6×10^{-6}
Residuals	45	8427.4	187.28		

Supplementary File S2. Mean harvest data per plant for each subplot in the field experiment. FW: fresh weight

Clone	Block	Shoot age	Number of small shoots	Number of large shoots	FW (g)	n
78183	M	1	1.5	6.1	246.7	12
78183	M	2	2.8	5.1	1001.7	12
78183	M	3	0	2.2	2170	12
78183	N	1	2.3	7.6	462.5	12
78183	N	2	4.4	5.5	1077.5	12
78183	N	3	0	2.2	1568.3	12
78183	S	1	2.1	6.2	390.8	12
78183	S	2	2.5	4.6	726.7	12
78183	S	3	0	2.3	1535	12
78195	M	1	1.8	5.6	203.3	12
78195	M	2	2.1	3.6	556.7	12
78195	M	3	5.8	1.7	1080	12
78195	N	1	1.3	6.9	392.7	11
78195	N	2	2	3.2	534.5	11
78195	N	3	10.3	2	1531.7	12
78195	S	1	1	5.5	295	12
78195	S	2	1.6	2.8	631.7	12
78195	S	3	2.8	1.7	980	12
Björn	M	1	1.9	5	573.6	11
Björn	M	2	2.4	1.7	1194.2	12
Björn	M	3	0	1.2	2896	10
Björn	N	1	1.4	6.2	702.5	12
Björn	N	2	2	2.2	1836.7	12
Björn	N	3	0	1.6	4269.2	12
Björn	S	1	1.8	5.5	890	11
Björn	S	2	1	1.8	1101.7	12
Björn	S	3	0	1.4	2121.1	9
Jorr	M	1	3.2	5.7	477.8	9
Jorr	M	2	2.5	2.4	532.5	12
Jorr	M	3	5	1.6	1833.6	11
Jorr	N	1	3.2	6.3	515.8	12
Jorr	N	2	2	2.5	858.3	12
Jorr	N	3	9	1.2	2294.2	12
Jorr	S	1	2	5.6	392.7	11
Jorr	S	2	2.4	3.4	940.8	12
Jorr	S	3	0	1.2	1503	10
Olof	M	1	1.7	5.2	971.7	12
Olof	M	2	1.3	4.1	1300.8	12
Olof	M	3	2	1.4	2630	11
Olof	N	1	1.9	3.4	482.5	12
Olof	N	2	1.9	1.9	1042.7	11
Olof	N	3	0	1.6	2850	12
Olof	S	1	2	4.2	669.2	12
Olof	S	2	1	3.3	1527.5	12
Olof	S	3	1.7	1.6	2470.9	11
Tora	M	1	2.2	6.8	1138.3	12
Tora	M	2	1.8	1.8	1150.8	12
Tora	M	3	0	1.4	3203.3	12

Tora	N	1	2.9	6.6	1044.2	12
Tora	N	2	1.2	3	1810.8	12
Tora	N	3	0	1.7	3253.3	12
Tora	S	1	1	5	651.7	12
Tora	S	2	1.9	2.2	1080	12
Tora	S	3	0	1.3	2208.3	12