

**Table S1.** Genetic constructs used in this study

<b>Name</b>	<b>Other name</b>	<b>Binary vector backbone</b>	<b>Reference</b>
<b>TA29::BARNASE::NOS</b>	-	pTTM8	Li et al. (2007)
<b>PTD::GUS::NOS</b>	3PG	modified pBI101	Sheppard et al. (2000)
<b>En35S::GUS::E9</b>	3SG	pMON10547	Perlak et al. (1993)
<b>EnACT11::GUS::E9</b>	3A11G	pMON10547	Perlak et al. (1993)
<b>EnACT2::GUS::E9</b>	3A2G	pMON10547	Perlak et al. (1993)

**Table S2.** Primers used in Polymerase Chain Reaction (PCR)

<b>Name</b>	<b>Sequence (5' → 3')</b>	<b>Size (bp)</b>	<b>Comment</b>	<b>Reference</b>
<b>ACT2.001</b>	atggtagctaggcaactatTTTTatgtatg	1228	Construction of	This study
<b>ACT2.002</b>	aggatccagctgcaaacacacaaaaagag		ACT2 promoter	
<b>ACT11.001</b>	taggtaccgctagcaaatgtcaaatggaatgcatc	1405	Construction of	This study
<b>ACT11.002</b>	gagaattctgtacatcctgtcaaaattgatataaa		ACT11 promoter	
<b>NPTII-F</b>	cttcttgacgagttcttc	340	Detection of	This study
<b>NPTII-R</b>	cgctgcctcgtcctg		Kan <sup>R</sup> gene	
<b>TA29-pro-F02</b>	tcctcacactaagtccatgtttgc	656	Detection of	This study
<b>TA29-term-R03</b>	ggaaagtgaaattgaccgatcagag		BARNASE gene	
<b>V35F5</b>	aggactattctggcttctcttac	880	Detection of	Skinner et
<b>GUS003</b>	ccagactgaatgcccacaggcc		GUS gene	al. (2003)

**Table S3.** ANOVA table (one-way ANOVA) for the non-transgenic control trees that were distributed between the four transgenic constructs in the reporter trial for 2001

<b>Name</b>	<b>Degrees of freedom</b>	<b>F-value</b>	<b>p-value</b>
<b>Construct</b>	3	2.700	0.139
<b>Error</b>	6		
<b>Total</b>	9		

**Table S4.** ANOVA tables (one-way ANOVA) for the non-transgenic control trees that were distributed between the four transgenic constructs in the reporter trial for 2003

<b>Name</b>	<b>Degrees of freedom</b>	<b>F-value</b>	<b>p-value</b>
<b>Construct</b>	3	0.526	0.683
<b>Error</b>	5		
<b>Total</b>	8		

**Table S5.** ANOVA table (2-way ANOVA) with “Event” and “Block” as main effects for the sterility trial model

<b>Name</b>	<b>Degrees of freedom</b>	<b>F-value</b>	<b>Pr(&gt;F)</b>
<b>Event</b>	18	52	<0.0001
<b>Block</b>	2	8822522	<0.0001
<b>Error</b>	46		
<b>Total</b>	66		

**Table S6.** Dunnett's test for the sterility trial

<b>Linear Hypotheses</b>	<b>Estimate</b>	<b>Standard error</b>	<b>z value</b>	<b>Pr(&gt; z )</b>	<b>Significance</b>
<b>1 - control == 0</b>	-38.214	2.226	-17.167	< 0.001	***
<b>2 - control == 0</b>	-36.771	2.310	-15.917	< 0.001	***
<b>3 - control == 0</b>	-35.636	2.347	-15.182	< 0.001	***
<b>4 - control == 0</b>	-29.152	6.340	-4.598	< 0.001	***
<b>5 - control == 0</b>	-25.580	8.004	-3.196	0.020	*
<b>6 - control == 0</b>	-24.984	6.734	-3.710	0.003	**
<b>7 - control == 0</b>	-24.857	5.633	-4.412	< 0.001	***
<b>8 - control == 0</b>	-22.705	3.337	-6.804	< 0.001	***
<b>9 - control == 0</b>	-21.313	2.949	-7.227	< 0.001	***
<b>10 - control == 0</b>	-20.932	6.532	-3.204	0.020	*
<b>11 - control == 0</b>	-19.960	4.761	-4.192	< 0.001	***
<b>12 - control == 0</b>	-19.490	4.933	-3.951	0.001	**
<b>13 - control == 0</b>	-18.859	2.722	-6.929	< 0.001	***
<b>14 - control == 0</b>	-17.734	4.780	-3.710	0.003	**
<b>15 - control == 0</b>	-17.513	12.739	-1.375	0.900	
<b>16 - control == 0</b>	-17.216	4.230	-4.070	< 0.001	***
<b>17 - control == 0</b>	-16.863	2.767	-6.094	< 0.001	***
<b>18 - control == 0</b>	-12.241	3.797	-3.224	0.018	*

\*\*\*:  $P < 0.001$ , \*\*:  $P < 0.01$ , and \*:  $P < 0.05$

**Table S7.** ANOVA table (one-way ANOVA) with “Construct” as main event for the reporter trial model for 2001

<b>Name</b>	<b>Degrees of freedom</b>	<b>F-value</b>	<b>p-value</b>
<b>Construct</b>	4	0.212	0.930
<b>Error</b>	36		
<b>Total</b>	40		

**Table S8.** ANOVA table (one-way ANOVA) with “Construct” as main event for the reporter trial model for 2003

<b>Name</b>	<b>Degrees of freedom</b>	<b>F-value</b>	<b>p-value</b>
<b>Construct</b>	4	0.263	0.900
<b>Error</b>	36		
<b>Total</b>	40		



**Table S9.** Dunnett's test table for the reporter trial data from 2001

<b>Linear Hypotheses</b>	<b>Estimate</b>	<b>Standard error</b>	<b>z value</b>	<b>Pr(&gt; z )</b>
<b>3A11G - control == 0</b>	-3.583	127.260	-0.028	1
<b>3A2G - control == 0</b>	-12.603	124.383	-0.101	0.999
<b>3PG - control == 0</b>	-41.193	127.035	-0.324	0.935
<b>3SG - control == 0</b>	0.556	124.768	0.004	1

**Table S10.** Dunnett's test table for the reporter trial data from 2003

<b>Linear Hypotheses</b>	<b>Estimate</b>	<b>Standard error</b>	<b>z value</b>	<b>Pr(&gt; z )</b>
<b>3A11G - control == 0</b>	-1586.1	8020.9	-0.198	0.993
<b>3A2G - control == 0</b>	-3041.2	8075.5	-0.377	0.937
<b>3PG - control == 0</b>	-4206.2	8054.7	-0.522	0.848
<b>3SG - control == 0</b>	-593.9	8391.2	-0.071	1

**Table S11.** ANOVA tables (one-way ANOVA) with “Event” as main effect for each construct in the reporter trial for 2001

3SG construct

<b>Name</b>	<b>Degrees of freedom</b>	<b>F-value</b>	<b>p-value</b>
<b>Event</b>	9	4.146	0.023
<b>Error</b>	9		
<b>Total</b>	18		

3PG construct

<b>Name</b>	<b>Degrees of freedom</b>	<b>F-value</b>	<b>p-value</b>
<b>Event</b>	9	7.495	0.001
<b>Error</b>	11		
<b>Total</b>	20		

3A2G construct

<b>Name</b>	<b>Degrees of freedom</b>	<b>F-value</b>	<b>p-value</b>
<b>Event</b>	9	17.356	1e-04
<b>Error</b>	10		
<b>Total</b>	19		

3A11G construct

<b>Name</b>	<b>Degrees of freedom</b>	<b>F-value</b>	<b>p-value</b>
<b>Event</b>	9	4.026	0.020
<b>Error</b>	10		
<b>Total</b>	19		

**Table S12.** ANOVA tables (one-way ANOVA) with “Event” as main effect for each construct in the reporter trial for 2003

3SG construct

<b>Name</b>	<b>Degrees of freedom</b>	<b>F-value</b>	<b>p-value</b>
<b>Event</b>	9	15.816	3e-04
<b>Error</b>	8		
<b>Total</b>	17		

3PG construct

<b>Name</b>	<b>Degrees of freedom</b>	<b>F-value</b>	<b>p-value</b>
<b>Event</b>	9	3.954	0.022
<b>Error</b>	10		
<b>Total</b>	19		

3A2G construct

<b>Name</b>	<b>Degrees of freedom</b>	<b>F-value</b>	<b>p-value</b>
<b>Event</b>	9	77.816	<0.0001
<b>Error</b>	9		
<b>Total</b>	18		

3A11G construct

<b>Name</b>	<b>Degrees of freedom</b>	<b>F-value</b>	<b>p-value</b>
<b>Event</b>	9	3.464	0.033
<b>Error</b>	10		
<b>Total</b>	19		

**Table S13.** Dunnett's test for the sterility trial data comparing catkin mean length of control to that of transgenic events for catkin collection from March 10, 2009

<b>Linear Hypotheses</b>	<b>Estimate</b>	<b>Standard error</b>	<b>z value</b>	<b>Pr(&gt; z )</b>
<b>Event 7 - control == 0</b>	-3.709	0.308	-12.059	< 2e-16
<b>Event 9 - control == 0</b>	-3.662	0.291	-12.573	< 2e-16
<b>Event 12 - control == 0</b>	-2.783	0.362	-7.682	1.58e-14
<b>Event 14 - control == 0</b>	-4.047	0.281	-14.387	< 2e-16

**Table S14.** Dunnett's test for the sterility trial data comparing catkin mean length of control to that of transgenic events for catkin collection from March 17, 2009

<b>Linear Hypotheses</b>	<b>Estimate</b>	<b>Standard error</b>	<b>z value</b>	<b>Pr(&gt; z )</b>
<b>Event 7 - control == 0</b>	-2.341	1.049	-2.231	0.114
<b>Event 9 - control == 0</b>	-2.822	0.459	-6.152	< 0.001
<b>Event 12 - control == 0</b>	-3.079	0.854	-3.605	0.002
<b>Event 14 - control == 0</b>	-4.103	0.618	-6.636	< 0.001
<b>Event 17 - control == 0</b>	-5.257	0.295	-17.805	< 0.001

**Table S15.** Catkin angle per event

<b>Event</b>	<b>Angle</b>
<b>7</b>	72.83
<b>9</b>	90.89
<b>12</b>	77.83
<b>14</b>	130.26
<b>17</b>	83.28
<b>Average</b>	<b>91.02</b>
<b>St. error</b>	<b>10.26</b>