

Table 1. Posterior estimates of model parameters. The three cost parameters are assumed by the model to reduce the number of eggs laid by non-wild type females: the somatic expression cost reduces fertility of transgenic females while the two types of deposition cost reduce the fertility of females with a transgenic parent, that may or may not be transgenic themselves. The eggs per batch parameter is the estimated batch size from females that neither carry the transgene, nor had a transgenic parent. Laying probability is assumed to affect all females equally. The NHEJ rate is the probability that a non-transgenic gamete produced by a transgene-heterozygous parent is a non-functional R2 allele rather than a wildtype allele.

Parameter	Mean	Posterior percentiles		
		0.025	0.5	0.975
Somatic expression cost	0.26	0.0093	0.23	0.58
Maternal deposition cost	0.44	0.012	0.43	0.96
Paternal deposition cost	0.48	0.072	0.52	0.81
Eggs per batch	117	54	108	219
Laying probability	0.13	0.073	0.13	0.20
NHEJ rate	0.49	0.27	0.48	0.81