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Supplementary information

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Cleave and Rescue gamete killers create conditions for gene drive in plants

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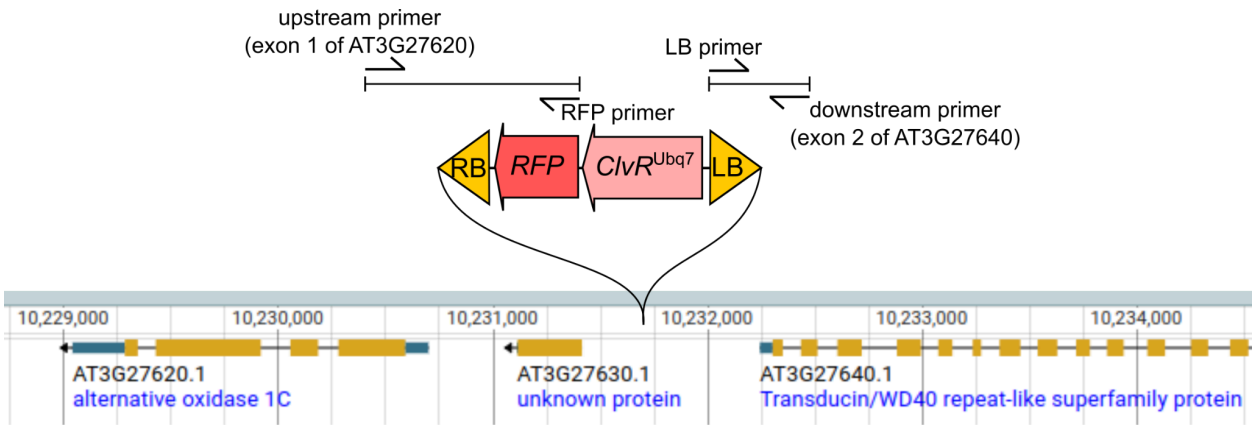
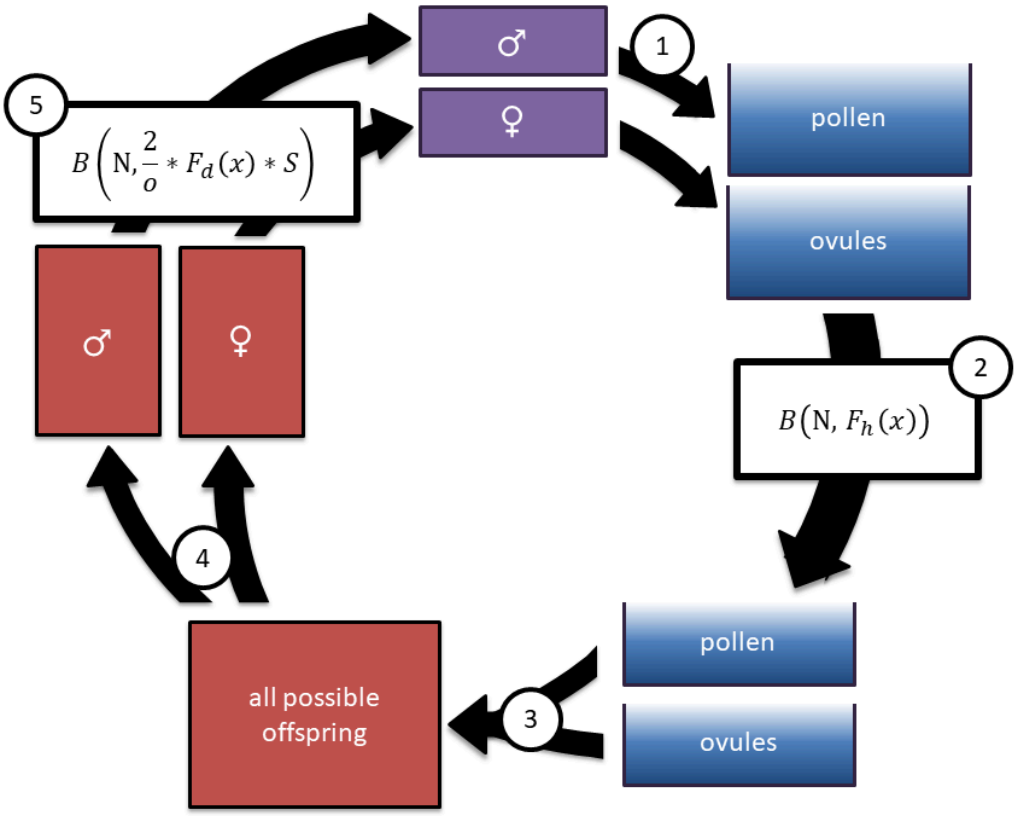


Supplementary Fig. 1: T-DNA insertion site of *ClvR*^{ubq7}. *ClvR*^{ubq7} is inserted in the intergenic region between AT3G27630 and AT3G27640 (TAIR10, Chr3: 10231731). The upstream breakpoint was amplified in a PCR with a primer binding in exon 1 of AT3G27620 and a construct specific primer binding at the start of the RFP marker gene. The downstream breakpoint was amplified with a primer binding in exon 2 of AT3G27640 and a construct specific primer binding in the LB region of the T-DNA. Sequences of the PCR amplicons are in Supplementary Data 2.



Supplementary Fig. 2: Modeling Process. Each generation starts with a pool of adult individuals, shown at the top in purple. This information is stored as a list where each index represents a possible genotype, and the associated value represents the number of individuals of that genotype. **(1)** For each mating, a single mother produces a pool of ovules and one (monogamous) or multiple (polygamous) males produce a single pool of pollen. **(2)** The number of ovules and pollen are reduced, based on their haploid fitness costs F_h such that a pollen with no fitness costs will have a 100% chance of survival, and a pollen with fitness cost 0.1 will only have a 90% chance of surviving. **(3)** From the pool of possible pollen and ovules, each ovule is mated with a single pollen to produce a possible offspring. **(4)** The possible offspring are randomly grouped as male or female **(5)**. The number of possible offspring is reduced to only those that survive. For each mating, the base chance of survival is 2 over the number of expected offspring *o*, as we expect each mating between a female and a male to produce 2 offspring when the population is at carrying capacity. This probability of survival is further modified by F_d, the fitness of the individual, and *S*. *S* denotes the density dependence function *S(P) = g / [1 + (g-1)* P/K]* where *P* is the parent generation's population size, and *K* is the carrying capacity. *S* ranges from some growth factor *g* = 6 at low densities, to 1 at densities near carrying capacity. The offspring that survive become the parents of the next generation.