

MS-Hammond-etal_SUPPL-DATA_Ag(QFS)1_Suppl-Data#2.xlsx

Egg Output

Cross	Replicate Cage	Female Population	Total Eggs	Eggs per Female	Average Eggs per Female	Relative Egg Output
(Control) G3 ♀ × G3 ♂	A	150	7340	48,93	49,84	
	B	150	8102	54,01		
	C	150	6986	46,57		
Ag(QFS)1 ♂ × G3 ♀	A	150	6428	42,85	34,77	69,77%
	B	150	4273	28,49		
	C	150	5042	33,61		
	D	150	5120	34,13		
Ag(QFS)1 ♀ × G3 ♂	A	150	3356	22,37	16,20	32,50%
	B	150	2961	19,74		
	C	150	2189	14,59		
	D	150	1212	8,08		
	A	150	4205	28,03		
Ag(QFS)1 ♂ × Ag(QFS)1 ♀	B	150	3231	21,54	20,16	40,44%
	C	150	2991	19,94		
	D	150	1667	11,11		

Crosses were performed using 120 males and 150 females and were bloodfed on day 6. All transgenic classes received the gene drive allele paternally.

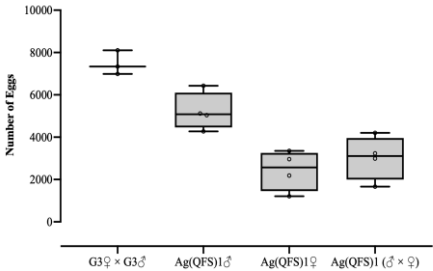
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Cross	Female Population	Total Eggs	Eggs per Female	Relative Egg Output
(Control) G3 ♀ × G3 ♂	50	5102	102,04	
Ag(QFS)1 ♂ × G3 ♀	50	6539	130,78	128,17%
Ag(QFS)1 ♀ × G3 ♂	50	1630	32,60	24,93%

The results here show the data obtained from the crosses that received the gene drive allele paternally. Crosses were performed using 50 males and 50 females and were bloodfed on day 5.

Statistical Values and Plotting

Cross	Mean	Deviation	of the Mean
(Control) G3 ♀ × G3 ♂	7476	570,29	329
Ag(QFS)1 ♂ × G3 ♀	5216	894,00	447
Ag(QFS)1 ♀ × G3 ♂	2430	945,35	473
Ag(QFS)1 ♂ × Ag(QFS)1 ♀	3024	1045,65	523



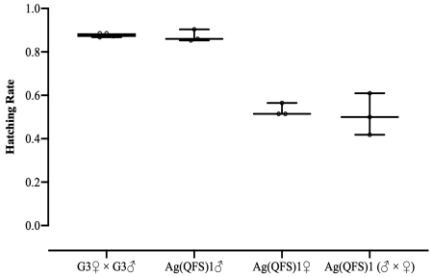
Hatching

Cross	Replicate Tray	Total Eggs Checked	Hatched Larvae	Larvae Not Hatched	Hatching Rate	Average Hatching Rate	Relative Hatching
(Control) G3 ♀ × G3 ♂	A	219	191	28	0,8721	0,8773	
	B	203	176	27	0,8670		
	C	200	177	23	0,8850		
	D	200	177	23	0,8850		
Ag(QFS)1 ♂ × G3 ♀	A	219	198	21	0,9041	0,8725	99,45%
	B	200	172	28	0,8600		
	C	225	192	33	0,8533		
Ag(QFS)1 ♀ × G3 ♂	A	200	113	87	0,5650	0,5313	60,57%
	B	208	107	101	0,5144		
	C	206	106	100	0,5146		
Ag(QFS)1 ♂ × Ag(QFS)1 ♀	A	215	90	125	0,4186	0,5094	58,06%
	B	274	167	107	0,6095		
	C	204	102	102	0,5000		

Random eggs obtained from the crosses were placed in trays and the hatching rate was assessed under a microscope 3 days post oviposition. All transgenic classes received the gene drive allele paternally.

Statistical Values and Plotting

Cross	Mean	Deviation	of the Mean
(Control) G3 ♀ × G3 ♂	0,8773	0,0092	0,0046
Ag(QFS)1 ♂ × G3 ♀	0,8725	0,0276	0,0159
Ag(QFS)1 ♀ × G3 ♂	0,5313	0,0292	0,0168
Ag(QFS)1 ♂ × Ag(QFS)1 ♀	0,5094	0,0958	0,0553



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Cross	Average Hatching Rate	Relative Hatching
(Control) G3 ♀ × G3 ♂	0,8617	
Ag(QFS)1 ♂ × G3 ♀	0,9268	107,55%
Ag(QFS)1 ♀ × G3 ♂	0,2205	25,59%

The results here show the data obtained from the crosses that received the gene drive allele paternally. Hatching rates were measured using the whole progeny of at least 45 females, laid individually.

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Hatching Rates

(Control) G3 ♀ × G3 ♂	Ag(QFS)1 ♂ × G3 ♀	Ag(QFS)1 ♀ × G3 ♂
0,7958	0,9655	0,0000
0,9570	0,9360	0,0794
0,9496	1,0000	0,0000
0,9730	0,9664	0,1471
1,0000	0,9737	0,8286
0,9394	0,9845	0,0957
0,9535	0,9771	0,0308
0,9855	1,0000	0,3600
0,9063	0,9706	0,8696
0,0000	0,9742	0,0000
0,9710	0,9524	0,5575
1,0000	0,9886	1,0000
0,0000	0,9740	0,0000
0,0000	0,8656	0,0000
1,0000	0,9847	0,0000
0,9408	0,9869	0,0000
0,9658	0,9880	0,0000
0,8740	0,9638	0,0000
1,0000	0,9416	
0,9815	0,9318	
0,9718	1,0000	
0,9609	0,9839	
0,9563	0,9943	
1,0000	0,8404	
0,9848	0,9730	
0,9701	0,9880	
0,9556	0,9672	
0,6460	1,0000	
1,0000	0,7881	
0,7705	0,9655	
0,9721	0,9920	
0,9471	0,9677	
0,7347	0,9590	
0,9910	0,9748	
0,8493	1,0000	
0,9803	0,9504	
1,0000	0,9774	
	0,9580	
	0,9922	
	0,6833	
	0,9739	
	0,0000	
	0,9824	
	0,9764	
	0,9178	
	0,4615	
	0,9665	

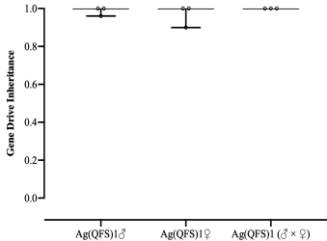
Gene Drive Inheritance

Cross	Replicate Tray	Total Larvae			Transgenic Rate	Average Transgenic Rate
		Screened	Positive Larvae	Negative Larvae		
Ag(QFS)1 ♂ × G3 ♀	A	575	575	0	1,0000	0,9868
	B	630	605	25	0,9603	
	C	648	648	0	1,0000	
Ag(QFS)1 ♀ × G3 ♂	A	560	560	0	1,0000	0,9667
	B	601	541	60	0,9002	
	C	871	871	0	1,0000	
Ag(QFS)1 ♂ × Ag(QFS)1 ♀	A	545	545	0	1,0000	1,0000
	B	669	669	0	1,0000	
	C	618	618	0	1,0000	

Random larvae from the crosses were split into 3 trays of 230 larvae each, and the transgenic rate was obtain at the L4 stage. All transgenic classes received the gene drive allele paternally.

Statistical Values and Plotting

Cross	Mean	Deviation	of the Mean
Ag(QFS)1 ♂ × G3 ♀	0,9868	0,0229	0,0132
Ag(QFS)1 ♀ × G3 ♂	0,9667	0,0576	0,0333
Ag(QFS)1 ♂ × Ag(QFS)1 ♀	1,0000	0,0000	0,0000



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Cross	Average Transgenic Rate
Ag(QFS)1 ♂ × G3 ♀	0,9786
Ag(QFS)1 ♀ × G3 ♂	1,0000

The results here show the data obtained from the crosses that received the gene drive allele paternally. Transgenic rates were measured using the whole progeny of at least 45 females, laid individually.

Kyrou *et al.* data Transgenic Rates

Ag(QFS)1 ♂ × G3 ♀	Ag(QFS)1 ♀ × G3 ♂
0,991	1,000
1,000	1,000
1,000	1,000
0,993	1,000
1,000	1,000
1,000	1,000
1,000	1,000
1,000	1,000
1,000	1,000
1,000	1,000
0,722	
1,000	
1,000	
1,000	
1,000	
0,876	
1,000	
0,958	
1,000	
1,000	
0,985	
1,000	
0,947	
1,000	
0,994	
1,000	
1,000	
0,954	
0,949	
0,992	
1,000	
1,000	
0,855	
1,000	
0,987	
1,000	
0,977	
1,000	
1,000	
0,982	
0,972	
1,000	
0,992	
0,889	
100,0%	

Chi Squared Test

Cross	Replicate Tray	Observed Rate	Expected Rate	Chi Squared Test
Ag(QFS)1 ♂ × G3 ♀	A	1,000	1,0	0,9992
	B	0,960	1,0	
	C	1,000	1,0	
Ag(QFS)1 ♀ × G3 ♂	A	1,000	1,0	0,9950
	B	0,900	1,0	
	C	1,000	1,0	
Ag(QFS)1 ♂ × Ag(QFS)1 ♀	A	1,000	1,0	1,0000
	B	1,000	1,0	
	C	1,000	1,0	

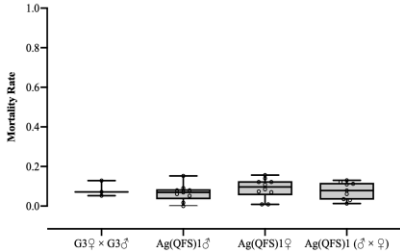
Larval Mortality

Cross	Replicate Tray	Dead Larvae	Total Larvae	Mortality Rate	Survival Rate	Average Survival Rate	Relative Survival
(Control) G3 ♀ × G3 ♂	A	15	210	0,0714	0,9286	0,9159	
	B	11	210	0,0524	0,9476		
	C	27	210	0,1286	0,8714		
	A1	16	200	0,0800	0,9200		
	A2	16	200	0,0800	0,9200		
Ag(QFS)1 ♂ × G3 ♀	A3	0	200	0,0000	1,0000	0,9329	101,86%
	B1	35	230	0,1522	0,8478		
	B2	21	230	0,0913	0,9087		
	B3	4	230	0,0174	0,9826		
	C1	14	230	0,0609	0,9391		
	C2	16	230	0,0696	0,9304		
	C3	12	230	0,0522	0,9478		
	A1	17	200	0,0850	0,9150		
	A2	14	200	0,0700	0,9300		
	A3	28	200	0,1400	0,8600		
Ag(QFS)1 ♀ × G3 ♂	B1	25	230	0,1087	0,8913	0,9105	99,41%
	B2	36	230	0,1565	0,8435		
	B3	28	230	0,1217	0,8783		
	C1	17	230	0,0739	0,9261		
	C2	2	230	0,0087	0,9913		
	C3	28	230	0,1217	0,8783		
	C4	2	230	0,0087	0,9913		
	A1	7	200	0,0350	0,9650		
	A2	22	200	0,1100	0,8900		
	A3	26	200	0,1300	0,8700		
Ag(QFS)1 ♂ × Ag(QFS)1 ♀	B1	7	230	0,0304	0,9696	0,9231	100,79%
	B2	3	230	0,0130	0,9870		
	B3	14	230	0,0609	0,9391		
	C1	26	230	0,1130	0,8870		
	C2	28	230	0,1217	0,8783		
	C3	18	230	0,0783	0,9217		

A fixed number of larvae was placed in replicate trays and the mortality rate was measured throughout the 4 instar larval stages. All transgenic classes received the gene drive allele paternally. All transgenic classes received the gene drive allele paternally.

Statistical Values and Plotting (Larval Mortality)

Cross	Mean	Deviation of the Mean	
(Control) G3 ♀ × G3 ♂	0,0841	0,0397	0,0229
Ag(QFS)1 ♂ × G3 ♀	0,0671	0,0439	0,0146
Ag(QFS)1 ♀ × G3 ♂	0,0895	0,0508	0,0161
Ag(QFS)1 ♂ × Ag(QFS)1 ♀	0,0769	0,0440	0,0147



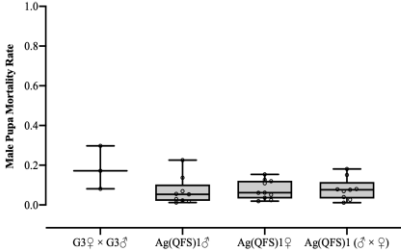
Pupa Mortality (Male)

Cross	Replicate Tray	Dead Male Pupae	Total Pupae	Mortality Rate	Survival Rate	Average Survival Rate	Relative Survival
(Control) G3 ♀ × G3 ♂	A	8	98	0,0816	0,9184	0,8163	
	B	17	99	0,1717	0,8283		
	C	28	94	0,2979	0,7021		
	A1	1	84	0,0119	0,9881		
	A2	2	88	0,0227	0,9773		
Ag(QFS)1 ♂ × G3 ♀	A3	3	102	0,0294	0,9706	0,9308	114,03%
	B1	13	95	0,1368	0,8632		
	B2	23	102	0,2255	0,7745		
	B3	7	126	0,0556	0,9444		
	C1	2	112	0,0179	0,9821		
	C2	7	101	0,0693	0,9307		
	C3	6	112	0,0536	0,9464		
	A1	6	97	0,0619	0,9381		
	A2	11	87	0,1264	0,8736		
	A3	2	84	0,0238	0,9762		
Ag(QFS)1 ♀ × G3 ♂	B1	18	117	0,1538	0,8462	0,9238	113,17%
	B2	12	100	0,1200	0,8800		
	B3	11	101	0,1089	0,8911		
	C1	2	103	0,0194	0,9806		
	C2	4	112	0,0357	0,9643		
	C3	5	98	0,0510	0,9490		
	C4	7	114	0,0614	0,9386		
	A1	5	193	0,0259	0,9741		
	A2	7	178	0,0393	0,9607		
	A3	2	174	0,0115	0,9885		
Ag(QFS)1 ♂ × Ag(QFS)1 ♀	B1	17	223	0,0762	0,9238	0,9207	112,79%
	B2	34	225	0,1511	0,8489		
	B3	39	215	0,1814	0,8186		
	C1	16	203	0,0788	0,9212		
	C2	14	202	0,0693	0,9307		
	C3	17	212	0,0802	0,9198		

Larvae were split in replicate trays of approximately 200 individuals and were left to reach the pupa stage. The total of the pupae was counted and sexed. The mortality rate was measured from the number of pupae that have failed to emerge into adults when in the enclosure cage. All transgenic classes received the gene drive allele paternally.

Statistical Values and Plotting (Male Pupa Mortality)

Cross	Mean	Deviation of the Mean	
(Control) G3 ♀ × G3 ♂	0,1837	0,1086	0,0627
Ag(QFS)1 ♂ × G3 ♀	0,0692	0,0699	0,0233
Ag(QFS)1 ♀ × G3 ♂	0,0762	0,0474	0,0150
Ag(QFS)1 ♂ × Ag(QFS)1 ♀	0,0793	0,0556	0,0185



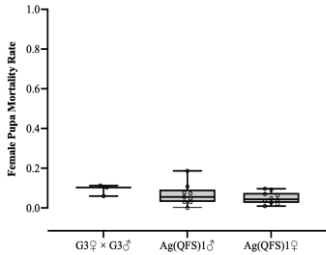
Pupa Mortality (Female)

Cross	Replicate Tray	Dead Female Pupa	Total Pupae	Mortality Rate	Survival Rate	Average Survival Rate	Relative Survival
(Control) G3 ♀ × G3 ♂	A	10	97	0,1031	0,8969	0,9082	
	B	6	100	0,0600	0,9400		
	C	10	89	0,1124	0,8876		
	A1	3	97	0,0309	0,9691		
Ag(QFS)1 ♂ × G3 ♀	A2	0	94	0,0000	1,0000	0,9324	102,67%
	A3	5	90	0,0556	0,9444		
	B1	7	91	0,0769	0,9231		
	B2	10	93	0,1075	0,8925		
	B3	17	91	0,1868	0,8132		
	C1	7	96	0,0729	0,9271		
	C2	5	104	0,0481	0,9519		
	C3	3	102	0,0294	0,9706		
Ag(QFS)1 ♀ × G3 ♂	A1	6	86	0,0698	0,9302	0,9500	104,60%
	A2	2	99	0,0202	0,9798		
	A3	3	88	0,0341	0,9659		
	B1	4	84	0,0476	0,9524		
	B2	9	93	0,0968	0,9032		
	B3	9	97	0,0928	0,9072		
	C1	1	109	0,0092	0,9908		
	C2	3	112	0,0268	0,9732		
	C3	4	100	0,0400	0,9600		
	C4	7	111	0,0631	0,9369		

Larvae were split in replicate trays of approximately 200 individuals and were left to reach the pupa stage. The total of the pupae was counted and sexed. The mortality rate was measured from the number of pupae that have failed to emerge into adults when in the enclosure cage. All transgenic classes received the gene drive allele paternally.

Statistical Values and Plotting (Female Pupa Mortality)

Cross	Mean	Deviation	of the Mean
(Control) G3 ♀ × G3 ♂	0,0918	0,0279	0,0161
Ag(QFS)1 ♂ × G3 ♀	0,0676	0,0546	0,0182
Ag(QFS)1 ♀ × G3 ♂	0,0500	0,0299	0,0094



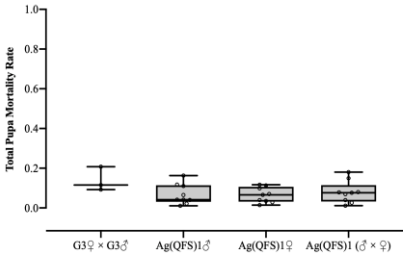
Pupa Mortality (Total)

Cross	Replicate Tray	Dead Pupa	Total Pupae	Mortality Rate	Survival Rate	Average Survival Rate	Relative Survival
(Control) G3 ♀ × G3 ♂	A	18	195	0,0923	0,9077	0,8615	
	B	23	199	0,1156	0,8844		
	C	38	183	0,2077	0,7923		
	A1	4	184	0,0217	0,9783		
Ag(QFS)1 ♂ × G3 ♀	A2	2	184	0,0109	0,9891	0,9320	108,18%
	A3	8	200	0,0400	0,9600		
	B1	23	195	0,1179	0,8821		
	B2	34	209	0,1627	0,8373		
	B3	25	226	0,1106	0,8894		
	C1	9	216	0,0417	0,9583		
	C2	14	214	0,0654	0,9346		
	C3	9	218	0,0413	0,9587		
Ag(QFS)1 ♀ × G3 ♂	A1	12	183	0,0656	0,9344	0,9353	108,56%
	A2	13	186	0,0699	0,9301		
	A3	5	172	0,0291	0,9709		
	B1	24	205	0,1171	0,8829		
	B2	22	194	0,1134	0,8866		
	B3	20	202	0,0990	0,9010		
	C1	3	213	0,0141	0,9859		
	C2	8	228	0,0351	0,9649		
	C3	9	228	0,0395	0,9605		
	C4	14					
Ag(QFS)1 ♂ × Ag(QFS)1 ♀	A1	5	193	0,0259	0,9741	0,9210	106,91%
	A2	7	178	0,0393	0,9607		
	A3	2	174	0,0115	0,9885		
	B1	17	223	0,0762	0,9238		
	B2	34	227	0,1498	0,8502		
	B3	39	216	0,1806	0,8194		
	C1	16	204	0,0784	0,9216		
	C2	14	202	0,0693	0,9307		
	C3	17	212	0,0802	0,9198		

Larvae were split in replicate trays of approximately 200 individuals and were left to reach the pupa stage. The total of the pupae was counted and sexed. The mortality rate was measured from the number of pupae that have failed to emerge into adults when in the enclosure cage. All transgenic classes received the gene drive allele paternally.

Statistical Values and Plotting (Total Pupa Mortality)

Cross	Mean	Deviation	of the Mean
(Control) G3 ♀ × G3 ♂	0,1385	0,0610	0,0352
Ag(QFS)1 ♂ × G3 ♀	0,0680	0,0511	0,0170
Ag(QFS)1 ♀ × G3 ♂	0,0647	0,0382	0,0127
Ag(QFS)1 ♂ × Ag(QFS)1 ♀	0,0790	0,0552	0,0184



Sex Ratios

Cross	Replicate Tray	Male Pupae	Female Pupae	Mosaic Pupae	Total Pupae	Male Rate	Average Male Rate	Female Rate	Average Female Rate	Mosaic Rate	Average Mosaic Rate
Ag(QFS)1 ♂ × G3 ♀	A1	84	97	3	184	0,4565	0,4980	0,5272	0,4667	0,0163	0,0353
	A2	88	94	2	184	0,4783		0,5109		0,0109	
	A3	102	90	8	200	0,5100		0,4500		0,0400	
	B1	95	91	9	195	0,4872		0,4667		0,0462	
	B2	102	93	14	209	0,4880		0,4450		0,0670	
	B3	126	91	9	226	0,5575		0,4027		0,0398	
	C1	112	96	8	216	0,5185	0,5032	0,4444	0,4868	0,0370	0,0100
	C2	101	104	9	214	0,4720		0,4860		0,0421	
	C3	112	102	4	218	0,5138		0,4679		0,0183	
	A1	97	86	0	183	0,5301		0,4699		0,0000	
	A2	87	99	0	186	0,4677		0,5323		0,0000	
	A3	84	88	0	172	0,4884		0,5116		0,0000	
Ag(QFS)1 ♀ × G3 ♂	B1	117	84	4	205	0,5707	0,5032	0,4098	0,4868	0,0195	0,0100
	B2	100	93	1	194	0,5155		0,4794		0,0052	
	B3	101	97	4	202	0,5000		0,4802		0,0198	
	C1	103	109	1	213	0,4836		0,5117		0,0047	
	C2	112	112	4	228	0,4912		0,4912		0,0175	
	C3	98	100	4	202	0,4851		0,4950		0,0198	
	C4	114	111	3	228	0,5000		0,4868		0,0132	

Statistical Values (Male Ratio)

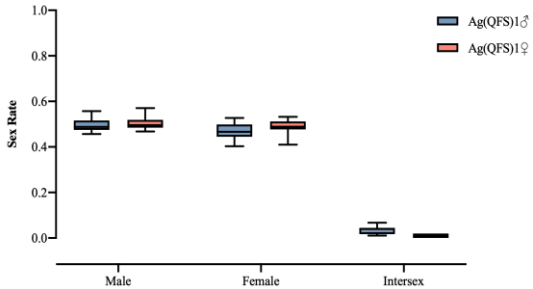
Cross	Mean	Deviation	of the Mean
Ag(QFS)1 ♂ × G3 ♀	0,4980	0,0303	0,0101
Ag(QFS)1 ♀ × G3 ♂	0,5032	0,0294	0,0093

Statistical Values (Female Ratio)

Cross	Mean	Deviation	of the Mean
Ag(QFS)1 ♂ × G3 ♀	0,4667	0,0376	0,0125
Ag(QFS)1 ♀ × G3 ♂	0,4868	0,0328	0,0104

Statistical Values (Mosaic Ratio)

Cross	Mean	Deviation	of the Mean
Ag(QFS)1 ♂ × G3 ♀	0,0353	0,0175	0,0058
Ag(QFS)1 ♀ × G3 ♂	0,0100	0,0088	0,0028



Survival Data - Small Cages

Day	(Control) G3 Females (+/+)			Ag(QFS)1 Heterozygous Females (+/-)			(Control) G3 Males (+/+)			Ag(QFS)1 Heterozygous Males (+/-)			Ag(QFS)1 Homozygous (-/-)		
	Cage A	Cage B	Cage C	Cage A	Cage B	Cage C	Cage A	Cage B	Cage C	Cage A	Cage B	Cage C	Cage A	Cage B	Cage C
1															
2															
3															
4	3	12	1	4	2	8	1	4	2	8			4	16	4
5	0	1	5	0	3	15	4	20	2	10			1	5	0
6	5	30	1	6	1	6	0	0	4	24			0	0	2
7	1	7	0	1	7	1	7	1	7	0	1	7	0	7	49
8	0	0	0	0	0	0	0	0	0	0	0	2	16	1	8
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	4	40	0	11	110	0	0	4	40	0	0	8	80	0	11
11	1	11	2	22	1	11	5	55	4	44	0	5	55	2	22
12	5	60	3	36	5	60	9	108	3	36	3	6	72	3	36
13	3	39	6	78	3	39	15	195	0	7	91	2	26	6	78
14	5	70	0	5	70	6	84	5	70	7	98	5	70	0	8
15	0	0	0	0	2	30	5	75	0	0	0	13	195	2	30
16	0	0	0	0	0	0	0	0	0	0	0	0	0	3	48
17	10	170	10	170	13	221	0	0	27	459	19	323	10	170	12
18	0	0	0	13	234	8	144	6	108	0	0	25	450	13	234
19	6	114	7	133	10	190	1	19	10	190	4	76	7	133	11
20	4	80	8	160	5	100	6	120	1	20	8	160	8	160	9
21	3	63	15	315	3	63	10	210	5	105	6	126	6	126	15
22	0	0	0	0	7	154	5	110	0	0	0	16	352	5	110
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	18	432	13	312	8	192	0	0	13	312	14	336	0	17	408
25	5	125	12	300	9	225	13	325	30	750	10	250	4	100	8
26	2	52	2	52	5	130	5	130	5	130	5	130	1	26	4
27	0	0	0	0	0	0	3	81	3	81	0	0	0	2	54
28	6	168	5	140	3	84	11	308	4	112	3	84	12	336	8
29	0	0	0	0	3	87	3	87	0	0	0	0	1	28	2
30	0	0	0	0	0	0	0	0	0	0	0	0	2	58	0
31	4	124	2	62	0	0	0	0	5	155	1	31	4	124	5
32	0	0	0	0	4	128	3	96	2	64	1	32	0	1	32
33	1	33	1	33	1	33	1	33	1	33	0	0	2	66	0
34															
35															
36															
37															
38															
39															
40															
Median Survival*	Female +/+	Female +/+	Female +/+	Female +/-	Female +/-	Female +/-	Male +/+	Male +/+	Male +/+	Male +/-	Male +/-	Male +/-	M+F -/-	M+F -/-	M+F -/-
Average Survival	19,5	21	18	20	25	18	20	21	19	18,5	19	18	13	13	17
No. Mosquitoes	19,0	20,5	17,7	19,4	21,4	19,4	20,4	21,1	19,4	18,2	19,5	18,2	17,0	16,3	15,5
Median Survival	86	89	86	116	107	119	99	96	103	120	113	102	96	83	99
Mean Survival		19,5			21,0			20,0			18,5			14,3	
Total No. of Mos.		19,1			20,0			20,3			18,6			16,3	
		261			342			298			335			278	

Legend

Numbers indicate the number of dead mosquitoes observed on the respective day. +/+ and +/- and -/- indicate wild type, heterozygous and homozygous individuals respectively.

Grey values indicate a 'daily death value', calculated by using the day and the number of mosquitoes that perished on that day.

	Mean			Median		
	Min	Max		Min	Max	
Average +/+ Females	19,1	17,7	20,5	19,5	18,0	21,0
Average +/+ Males	20,3	19,4	21,1	20,0	19,0	21,0
Average +/+ Both sexes	19,7	18,5	20,8	19,8	18,5	21,0
Average +/- Females	20,0	19,4	21,4	21,0	18,0	25,0
Average +/- Males	18,6	18,2	19,5	18,5	18,0	19,0
Average +/- Both sexes	19,3	18,8	20,4	19,8	18,0	22,0

* Median survival was calculate using GraphPad Prism version 9.0.2 (132) for Mac.

Survival Data - Large Cages (before population experiment)

Day	(Control) G3 Females (+/+)						Ag(QFS)1 Heterozygous Females (+/-)						(Control) G3 Males (+/+)						Ag(QFS)1 Heterozygous Males (+/-)						Ag(QFS)1 Homozygous (-/-)							
	Cage A	Cage B	Cage C	Cage A	Cage B	Cage C	Cage A	Cage B	Cage C	Cage A	Cage B	Cage C	Cage A	Cage B	Cage C	Cage A	Cage B	Cage C	Cage A	Cage B	Cage C	Cage A	Cage B	Cage C	Cage A	Cage B	Cage C	Cage A	Cage B	Cage C		
1	3	0	0	0	0	1	0	0	0	1	1	2	0	0	0	2	2	0	0	1	1	0	0	0	0	0	0	0	0	0		
2	7	2	7	3	6	3	3	6	4	8	3	10	6	2	4	1	2	19	38	0	0	0	0	0	0	0	0	0	0	0		
3	0	0	0	0	0	0	0	0	0	31	93	0	0	0	0	0	0	0	24	72	0	0	0	0	0	0	0	0	0	0		
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	156	43	172	29	116	0	0	0	0		
5	21	105	39	195	35	175	44	220	28	140	0	0	37	73	365	46	230	69	345	54	270	0	0	26	130	26	130	22	110	0		
6	15	90	14	84	19	114	19	114	17	102	40	240	13	78	10	60	22	132	14	84	22	132	26	156	14	84	8	48	22	132		
7	7	49	9	63	9	63	10	70	14	98	9	63	18	126	2	14	6	42	5	35	8	56	10	70	2	14	8	56	1	7		
8	9	72	9	72	9	72	4	32	11	88	7	56	11	88	1	8	7	56	1	8	2	16	0	0	1	8	2	16	1	8		
9	7	63	7	63	10	90	9	81	9	81	3	27	6	54	0	0	2	18	0	0	4	36	3	27	0	0	0	0	0	0		
10	0	0	0	0	0	0	0	0	0	0	1	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11	0		
12	14	168	10	120	11	132	5	60	15	180	0	0	2	24	1	12	1	12	0	0	0	0	0	0	0	0	0	0	0	0	0	
13	1	13	0	0				3	39	3	39	0	0	0	0				0	0	0	0	0	0	0	0	0	0	0	0	0	
14	3	42	2	28				1	14	0	0	0	0	0	1	14			0	0	1	14										
15	0	0											0	0																		
16	0	0											0	0																		
17	0	0											0	0																		
18	0	0											0	0																		
19	1	19											1	19																		
Median Survival*	Female +/+	Female +/+	Female +/+	Female +/-	Female +/-	Female +/-	Male +/+	Male +/+	Male +/+	Male +/-	Male +/-	Male +/-	M+F -/-	M+F -/-	M+F -/-																	
Average Survival	7.1	6.8	6.5	6.2	7.4	5.4	4.2	4.8	5.4	5.1	5.6	4.5	4.8	4.9	5.1	4.8	4.9	5.1	4.8	4.9	5.1	4.8	4.9	5.1	4.8	4.9	5.1	4.8	4.9	5.1	4.8	
No. Mosquitoes	88	92	100	94	101	99	93	98	90	93	91	84	82	87	76	82	87	76	82	87	76	82	87	76	82	87	76	82	87	76	82	
Median Survival	6.0	6.0	6.0	6.0	6.2	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	
Mean Survival	6.8	6.8	6.8	6.8	6.3	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	
Total No. of Mos.	280	280	280	280	294	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281

Legend
Numbers indicate the numbers of dead mosquitoes observed on the respective day. +/+ and +/- and -/- indicate wild type, heterozygous and homozygous individuals respectively.

Grey values indicate a 'daily death value', calculated by using the day and the number of mosquitoes that perished on that day.

	Mean			Median		
	Min	Max		Min	Max	
Average +/+ Females	6.8	6.5	7.1	6.0	6.0	6.0
Average +/+ Males	4.8	4.2	5.4	5.3	5.0	6.0
Average +/+ Both sexes	5.8	5.3	6.3	5.7	5.5	6.0
Average +/- Females	6.3	5.4	7.4	6.2	5.5	7.0
Average +/- Males	5.1	4.5	5.6	4.3	3.0	5.0
Average +/- Both sexes	5.7	5.0	6.5	5.3	4.3	6.0

* Median survival was calculate using GraphPad Prism version 9.0.2 (132) for Mac.

Survival Data - Large Cages (after population experiment)

Day	(Control) G3 Females (+/+)						Ag(QFS)1 Heterozygous Females (+/-)						(Control) G3 Males (+/+)						Ag(QFS)1 Heterozygous Males (+/-)					
	Cage 3	Cage 4	Cage 6	Cage 1	Cage 2	Cage 5	Cage 3	Cage 4	Cage 5	Cage 3	Cage 4	Cage 6	Cage 1	Cage 2	Cage 5	Cage 3	Cage 4	Cage 6	Cage 1	Cage 2	Cage 5	Cage 3	Cage 4	Cage 6
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	2	1	2	0	0	1	2	0	0	0	0	1	2	0	0	0	1	2	4	2	4	2	4
3	4	12	0	0	0	0	7	21	5	15	0	0	4	12	0	0	2	6	15	45	0	0	4	12
4	2	8	2	8	0	0	1	4	1	4	1	4	4	16	5	20	7	28	4	16	0	0	4	16
5	4	20	0	0	0	0	0	0	0	0	0	0	5	25	9	45	3	15	7	35	5	25	5	25
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	3	21	3	21	1	7	1	7	1	7	6	42	11	77	11	77	8	56	9	63	4	28	13	91
8	2	16	0	0	0	0	1	8	4	32	3	24	5	40	9	72	4	32	7	56	4	32	3	24
9	2	18	1	9	2	18	2	18	4	36	1	9	10	90	4	36	4	36	1	9	3	27	5	45
10	3	30	2	20	4	40	2	20	1	10	3	30	2	20	6	60	2	20	0	0	0	0	6	60
11	5	55	5	55	3	33	2	22	6	66	5	55	5	55	7	77	4	44	5	55	6	66	7	77
12	3	36	1	12	2	24	4	48	3	36	4	48	3	36	4	48	1	12	2	24	3	36	2	24
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	8	112	13	182	14	196	6	84	7	98	14	196	1	14	6	84	10	140	1	14	5	70	1	14
15	4	60	7	105	6	90	1	15	7	105	2	30	3	45	1	15	1	15	1	15	3	45	1	15
16	1	16	3	48	2	32	3	48	1	16	3	48	0	0	1	16	1	16	2	32	2	32	4	64
17	0	0	5	85	3	51	4	68	5	85	2	34	0	0	1	17	1	17	3	51	0	0	0	0
18	3	54	2	36	3	54	2	36	1	18	4	72	3	54	0	0	2	36	3	54	1	18	0	0
19	0	0	0	0	1	19	3	57	3	57	3	57	0	0	0	0	0	0	4	76	0	0	0	0
20	5	100	1	20	7	140	0	0	3	60	4	80	0	0	0	0	3	60	0	0	0	0	0	0
21	0	0	0	0	0	0	7	147	0	0	0	0	0	0	0	0	0	0	2	42	0	0	0	0
22	0	0	0	0	1	22	0	0	1	22	1	22	0	0	0	0	1	22	0	0	3	66	0	0
23	1	23	0	0	6	138	3	69	1	23	0	0	0	0	1	23	0	0	0	0	0	0	0	0
24	1	24	2	48	1	24	4	96	0	0	2	48	1	24	1	24	1	24	1	24	1	24	0	0
25	0	0	0	0	0	0	1	25	1	25	1	25	0	0	0	0	0	0	0	0	1	25	0	0
26	1	26	0	0	0	0	0	0	0	0	1	26	0	0	0	0	1	26	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	2	56	3	84	2	56	6	168	2	56	2	56	0	0	0	0	0	0	0	0	1	28	0	0
29	0	0	0	0	1	29	0	0	0	0	0	0	0	0	0	0	1	29	0	0	0	0	0	0
30	0	0	0	0	0	0	1	30	0	0	0	0	0	0	0	0	0	1	30	0	0	0	0	0
Median Survival*	12	14	15	16,5	14	14	8	8	10	7	11	8	14,5	13,5	14,0	14,7	14,7	181	12,5	14,4	16,5	16,0	13,5	14,6
Average Survival	12,5	14,4	16,5	16,0	13,5	14,6	8,8	9,3	11,3	9,2	12,0	8,3	12,1	10,7	13,9	11,2	10,0	12,5	14,7	13,5	16,0	14,8	14,0	16,5
No. Mosquitoes	55	51	59	62	57	62	58	66	59	70	44	57	70	44	57	70	44	57	70	44	57	70	44	57
Median Survival		13,7			14,8			8,7			9,8			9,8			171			9,8				
Mean Survival		14,5			14,7			9,8						9,8						9,8				
Total No. of Mos.		165			181			183						171						171				

Legend

Numbers indicate the numbers of dead mosquitoes observed on the respective day. +/+ and +/- and -/- indicate wild type, heterozygous and homozygous individuals respectively.

Grey values indicate a 'daily death value', calculated by using the day and the number of mosquitoes that perished on that day.

	Mean			Median		
	Min	Max		Min	Max	
Average +/+ Females	14,5	12,5	16,5	13,7	12,0	15,0
Average +/+ Males	9,8	8,8	11,3	8,7	8,0	10,0
Average +/- Both sexes	12,1	10,7	13,9	11,2	10,0	12,5
Average +/- Females	14,7	13,5	16,0	14,8	14,0	16,5
Average +/- Males	9,8	8,3	12,0	8,7	7,0	11,0
Average +/- Both sexes	12,3	10,9	14,0	11,8	10,5	13,8

* Median survival was calculate using GraphPad Prism version 9.0.2 (132) for Mac.