

**Table S1.** Model selection for *Varroa destructor* infestation according to apiary and mite-resistance of the bee population through AIC and log ratio test (LRT).

Model	df	AIC	Deviance	LRT	p
A + C + P + AxP + Px C + Ax C + AxPx C	8	5851.04		-2917.5	
A + C + P + AxP + Px C + Ax C	7	5853.07	-4.03	-2919.5	0.0446
A + C + P + AxP + Px C	6	5878.95	-27.88	-2933.5	0.0000
A + C + P + AxP	5	5886.56	-9.61	-2938.3	0.0019
A + C + P	4	5890.89	-6.34	-2941.4	0.0118
A + P	3	6822.89	-934.00	-3408.4	0.0000
A + C	3	6496.24	-607.35	-3245.1	0.0000
P + C	3	6101.64	-212.751	3047.8	0.0000
P	2	7032.82	-211.93	-3514.4	0.0000
A	2	7359.95	-539.06	-3678.0	0.0000
C	2	6631.20	-136.96	-3313.6	0.0000

A: Apiary with two levels, original population of mite-susceptible bees (Apiary S) or mite-resistant bees (Apiary R); C: Cell type with two levels, drone cells or worker cells; P: Mite-resistance bee population with two levels, mite-susceptible or mite-resistant bees.