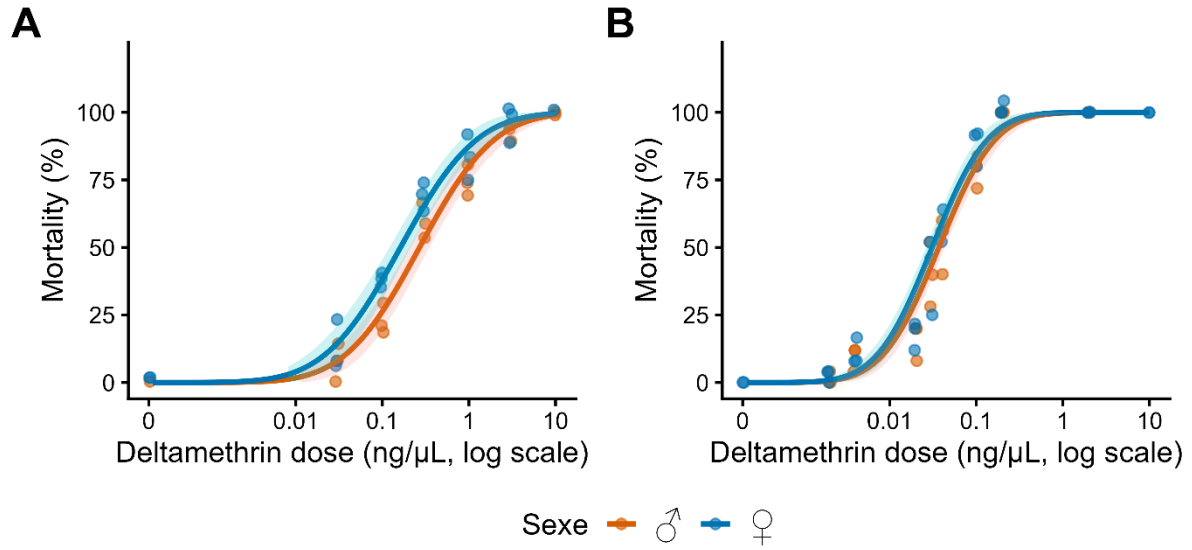
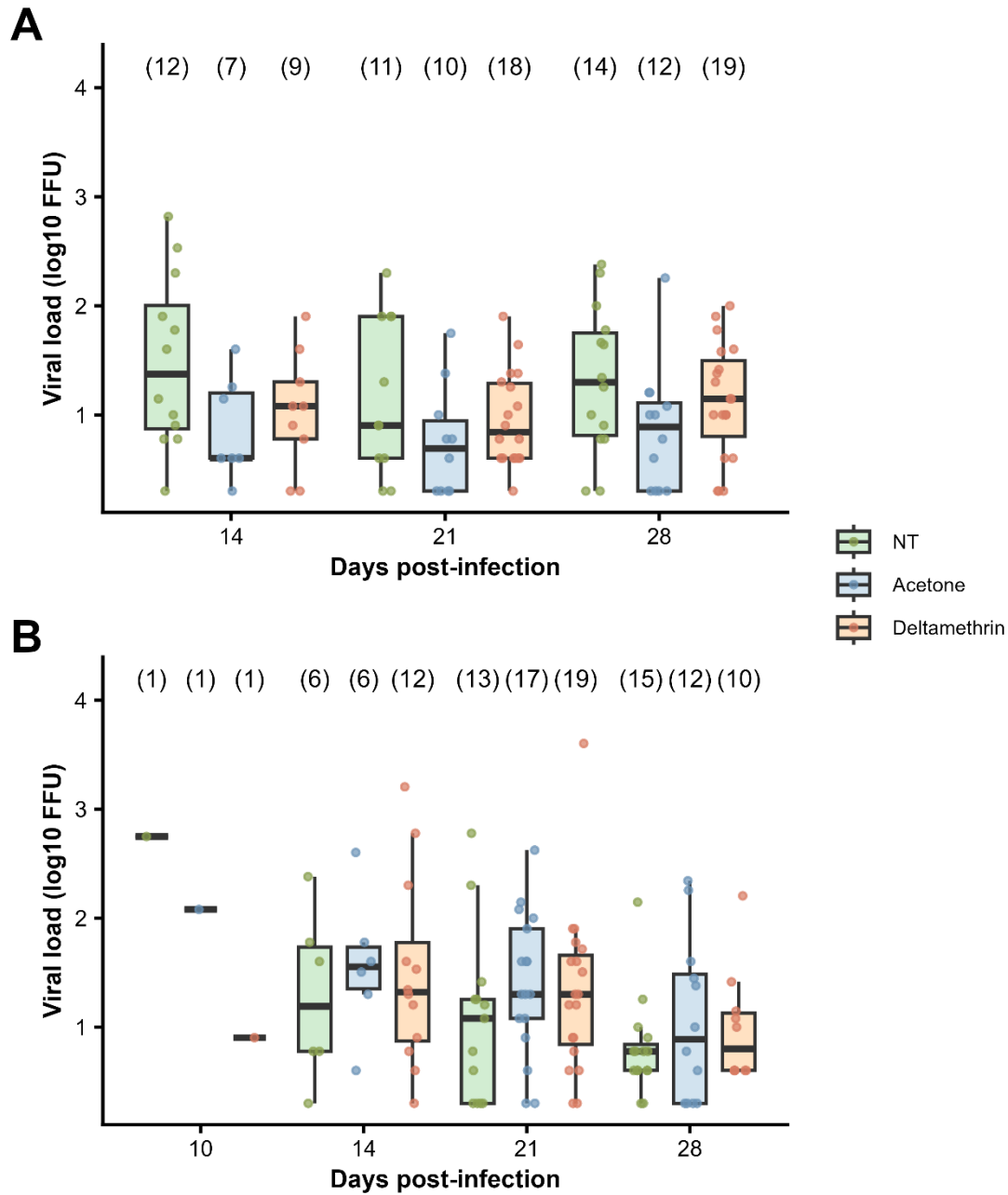




Supplementary Figure 1. Dose-response curves of W+ (A) and W- (B) populations. *Ae. aegypti* mosquitoes exposed to several doses of deltamethrin. Points represent observed mortality (in %) at each dose (ng/μL, log scale), including zero-dose controls, 24 h after exposure across the three independent replicates. Lines show fitted log-normal binomial models (LN.2), and shaded areas indicate 95 % confidence intervals. LD₁₀ and LD₂₅ values are indicated for each sex (♂ in blue, ♀ in orange) for the W+ and the W- populations.



Supplementary Figure 2. DENV viral load in saliva of W- mosquitoes exposed to deltamethrin.

(A) Exposure to LD₂₅ 3 days before the infectious blood meal. (B) Exposure to LD₂₅ 3 days after the infectious blood meal. DENV viral loads are shown as log₁₀ FFU per saliva sample. Each point represents an individual mosquito saliva. Tests indicate no significant difference between conditions and exposure timing (Kruskal-Wallis: $p > 0.164$ for A and $p > 0.254$ for B). NT, untreated mosquitoes. In brackets, number of mosquitoes with infectious saliva.

Region	Primer	Sequence (5' - 3')	Reference
<i>Wolbachia</i> surface protein (wsp) (<i>Wolbachia</i> : KX650072.1)	wsp F	CATTGGTGTTGGTGTTGGTG	[15]
	wsp R	ACACCAGCTTTTACTTGACCAG	
Structural ribosomal protein 40S (<i>Ae. aegypti</i> : AAEL004175)	Rps17 F	TCCGTGGTATCTCCATCAAGC	[15]
	Rps17 R	CACTCCGGGCACGTAGTTGTC	

Supplementary Table 1. List of primers targeting *Wolbachia* and mosquito genes for qPCR.

<i>Wolbachia</i> status	Condition	Replicate	Number of females that laid eggs	Total female tested	Egg-laying probability (95% CI)
W-	NT	A	18	24	75% (55.1%–88%)
W-	NT	B	18	24	75% (55.1%–88%)
W-	NT	Mean	36	48	75% (61.2%–85.1%)
W-	Acetone	A	19	24	79.2% (59.5%–90.8%)
W-	Acetone	B	20	24	83.3% (64.1%–93.3%)
W-	Acetone	Mean	39	48	81.2% (68.1%–89.8%)
W-	Δ LD10	A	16	24	66.7% (46.7%–82%)
W-	Δ LD10	B	19	24	79.2% (59.5%–90.8%)
W-	ΔLD10	Mean	35	48	72.9% (59%–83.4%)
W-	Δ LD25	A	18	24	75% (55.1%–88%)
W-	Δ LD25	B	14	15	93.3% (70.2%–98.8%)
W-	ΔLD25	Mean	32	39	82.1% (67.3%–91%)
W+	NT	A	11	24	45.8% (27.9%–64.9%)
W+	NT	B	19	24	79.2% (59.5%–90.8%)
W+	NT	Mean	30	48	62.5% (48.4%–74.8%)
W+	Acetone	A	18	24	75% (55.1%–88%)
W+	Acetone	B	12	24	50% (31.4%–68.6%)
W+	Acetone	Mean	30	48	62.5% (48.4%–74.8%)
W+	Δ LD10	A	17	27	63% (44.2%–78.5%)
W+	Δ LD10	B	12	26	46.2% (28.8%–64.5%)
W+	ΔLD10	Mean	29	53	54.7% (41.5%–67.3%)
W+	Δ LD25	A	10	24	41.7% (24.5%–61.2%)
W+	Δ LD25	B	10	24	41.7% (24.5%–61.2%)
W+	ΔLD25	Mean	20	48	41.7% (28.8%–55.7%)

Supplementary Table 2. Effect of *Wolbachia* infection and deltamethrin exposure on mosquito egg-laying probability. Egg-laying success is shown for *Wolbachia*-uninfected (W–) and *Wolbachia*-infected (W+) females under different treatments (NT, untreated; Acetone; Δ LD₁₀; Δ LD₂₅). Data includes individual replicates (A, B) and the mean per condition (highlighted in light gray). 95% Confidence intervals, 95% Wilson confidence intervals CI.

Condition	Group	<i>Wolbachia</i> - positive females	Total female tested	Frequency	95% CI
NT	Female	22	23	95.7%	[79–99.2%]
NT	Male	21	23	91.3%	[73.2–97.6%]
NT	Total	43	46	93.5%	[82.5–97.8%]
Acetone	Female	23	23	100%	[85.7–100%]
Acetone	Male	22	22	100%	[85.1–100%]
Acetone	Total	45	45	100%	[92.1–100%]
Δ LD10	Female	23	23	100%	[85.7–100%]
Δ LD10	Male	22	22	100%	[85.1–100%]
ΔLD10	Total	45	45	100%	[92.1–100%]
Δ LD25	Female	23	23	100%	[85.7–100%]
Δ LD25	Male	23	23	100%	[85.7–100%]
ΔLD25	Total	46	46	100%	[92.3–100%]

Supplementary Table 3. *Wolbachia* infection frequencies in F1 individuals according to maternal insecticide exposure and sex. *Wolbachia* infection frequencies are presented as percentages with 95% confidence intervals (CI) (Wilson method) for females, males, and total individuals within each condition. NT: untreated, Δ : deltamethrin. *Wolbachia* infection status was determined based on Ct and Δ Ct thresholds.