

Figure S1. Effects of UV-A on the egg hatch of *D. citri*. In Expts. 1, 2, and 3, the eggs were exposed daily to 8, 12, and 26 W m<sup>-2</sup> for 30 to 180 min and, in Expt. 4 they were exposed at 107 W m<sup>-2</sup> for 30–300 min each day. The data are means ( $n = 4$ ; 24–185 eggs per replication), and the bars represent the standard errors. Means annotated with different letters are significantly different from each other according to Duncan's MRT tests at  $p = 0.05$ .

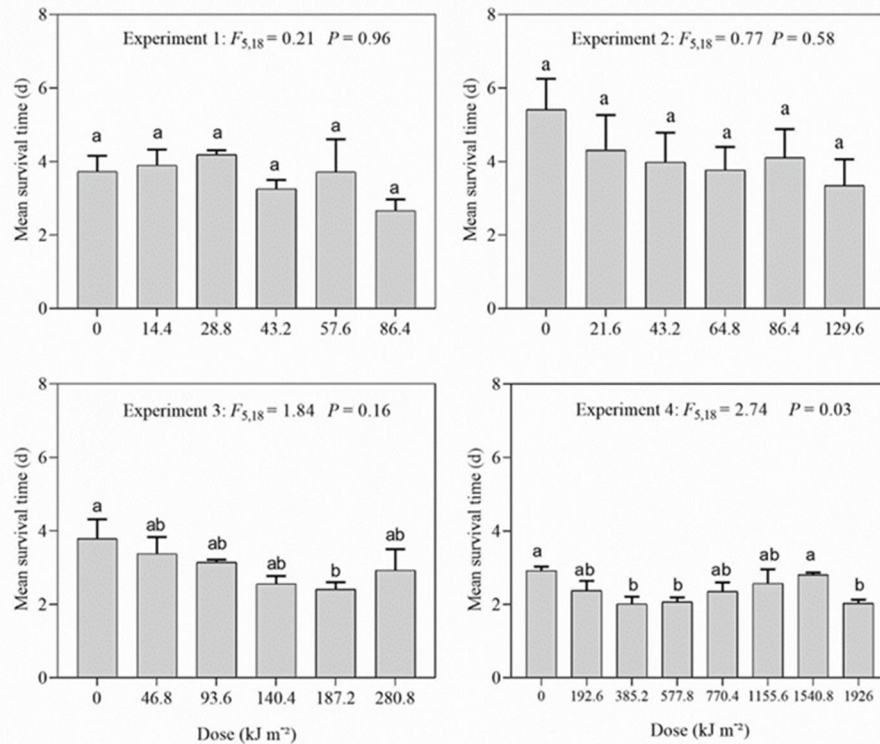


Figure S2. Effects of UV-A on survival of nymphs hatching from irradiated eggs of *D. citri*. In Expts. 1, 2, and 3, the eggs were exposed daily to 8, 12, and 26 W m<sup>-2</sup> for 30 to 180 min and, in Expt. 4, they were exposed at 107 W m<sup>-2</sup> for 30–300 min each day. The data are means ( $n = 4$ ; 10–133 eggs per replication), and the bars represent the standard errors. Means annotated with different letters are significantly different from each other according to Duncan's MRT tests at  $p = 0.05$ .

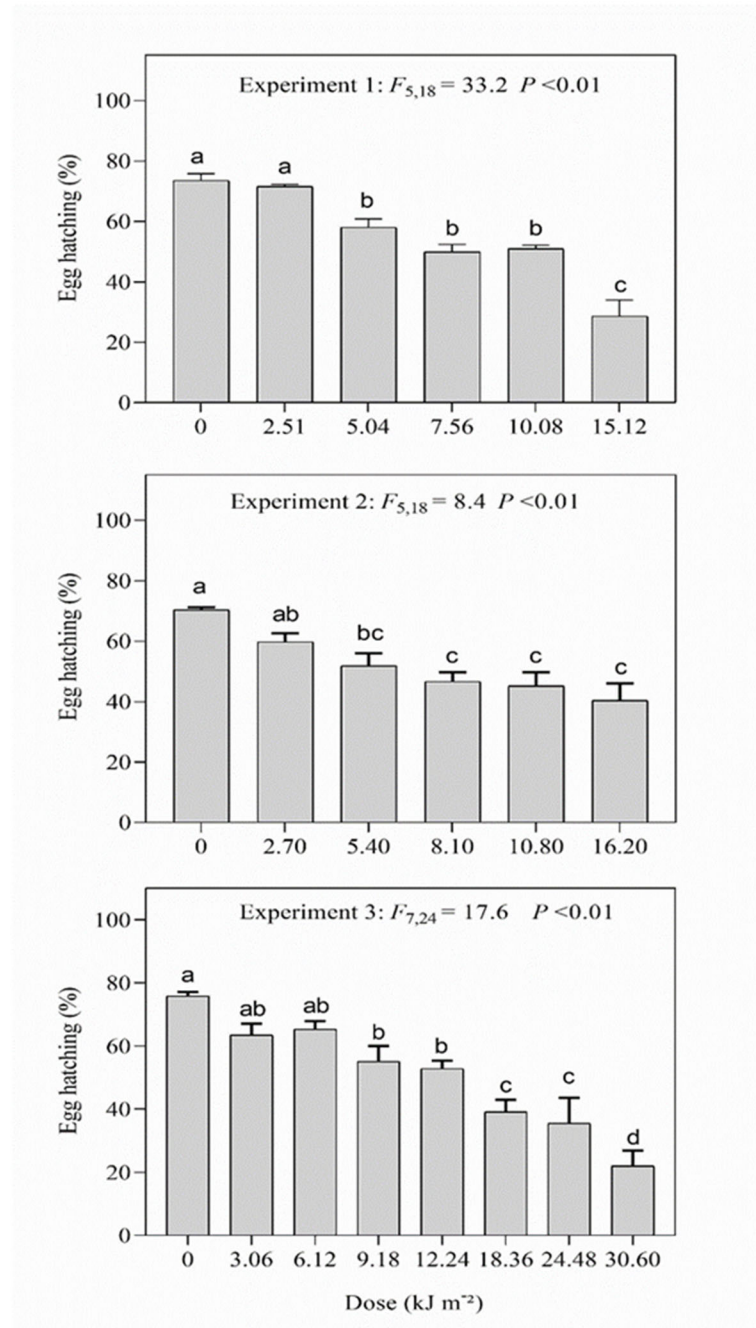


Figure S3. Effects of UV-B on egg hatching of *D. citri* following different exposure durations and intensities. In Expts. 1 and 2, the eggs were exposed daily to 1.4 and 1.5 W m<sup>-2</sup> for 30 to 180 min and, in Expt. 3, they were exposed at 1.7 W m<sup>-2</sup> for 30–300 min each day. The data are means ( $n = 4$ ; 20–100 eggs per replication), and the bars represent the standard errors. Means annotated with different letters are significantly different from each other according to Duncan's MRT tests at  $p = 0.05$ .

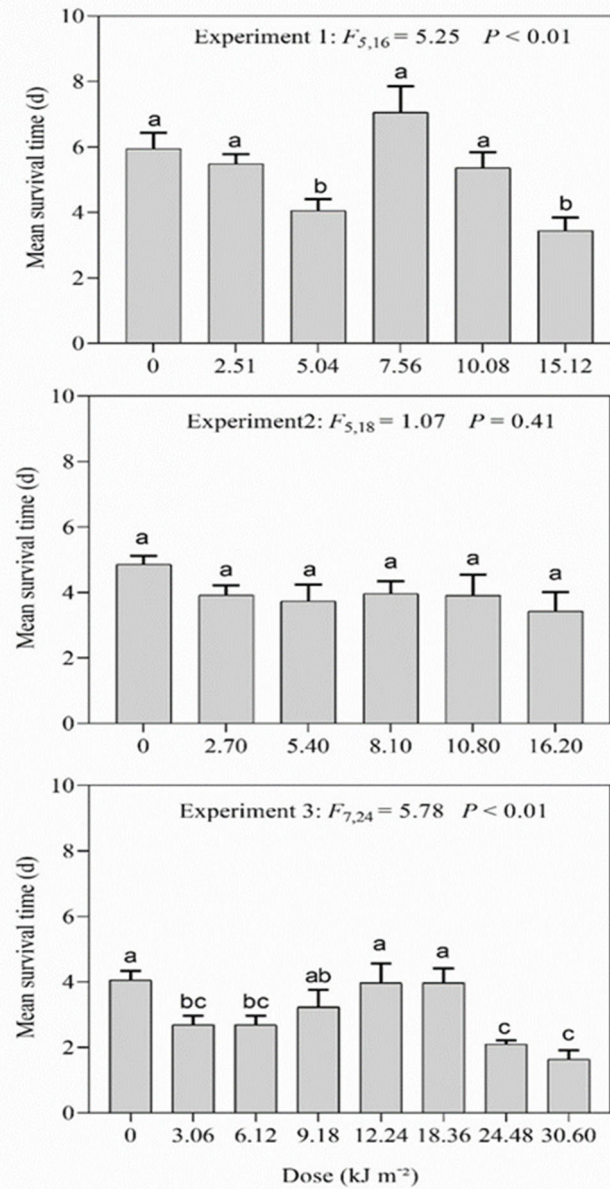


Figure S4. Effects of UV-B on survival of early nymphs that hatched from irradiated eggs. In Expts. 1 and 2, the eggs were exposed daily to 1.4 and 1.5 W m<sup>-2</sup> for 30 to 180 min and, in Expt. 3, they were exposed at 1.7 W m<sup>-2</sup> for 30–300 min each day. The data are means ( $n = 4$ ; 5–100 nymphs per replication), and the bars represent the standard errors. Means annotated with different letters are significantly different from each other according to Duncan's MRT tests at  $p = 0.05$ .

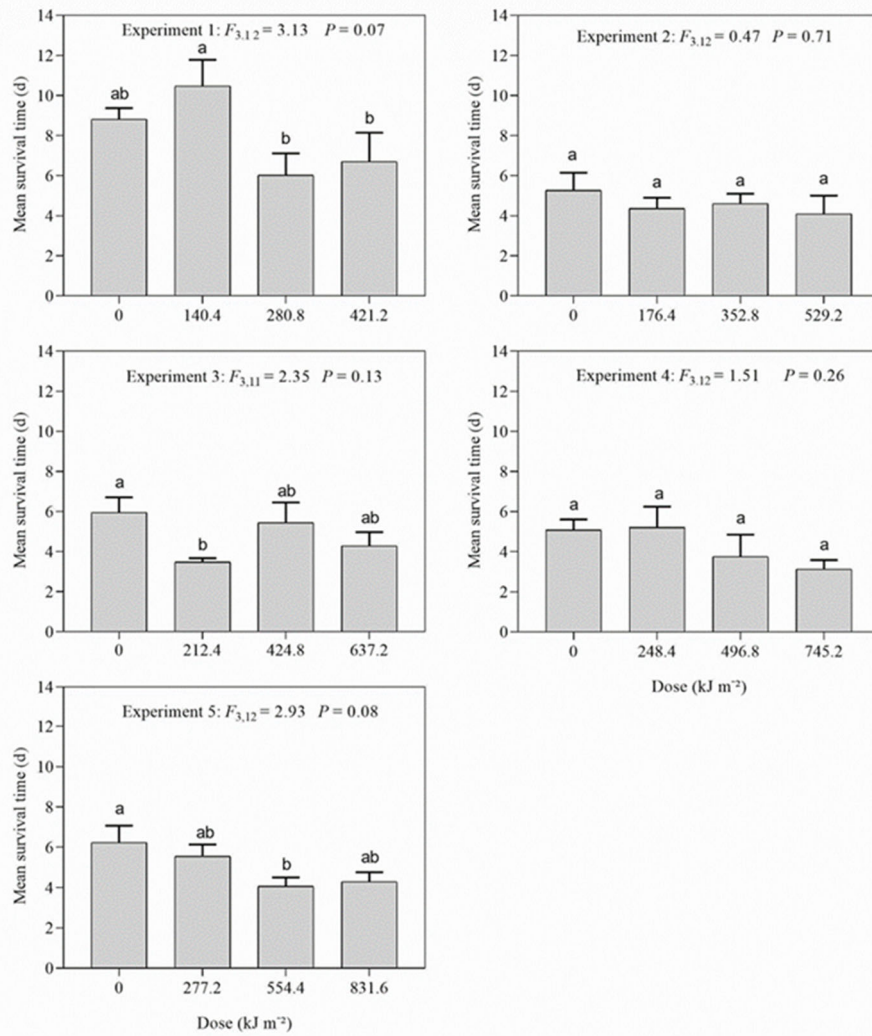


Figure S5. Effects of UV-A on survival of early instar nymphs of *D. citri* irradiated with UV-A. In Expts. 1, 2, 3, 4, and 5, the nymphs were, respectively, irradiated daily with 39, 49, 59, 69, and 77 W m<sup>-2</sup> for 60 to 180 min. The data are means ( $n = 4$ ; 20–100 nymphs per replication), and the bars represent the standard errors. Means annotated with different letters are significantly different from each other according to Duncan's MRT tests at  $p = 0.05$ .



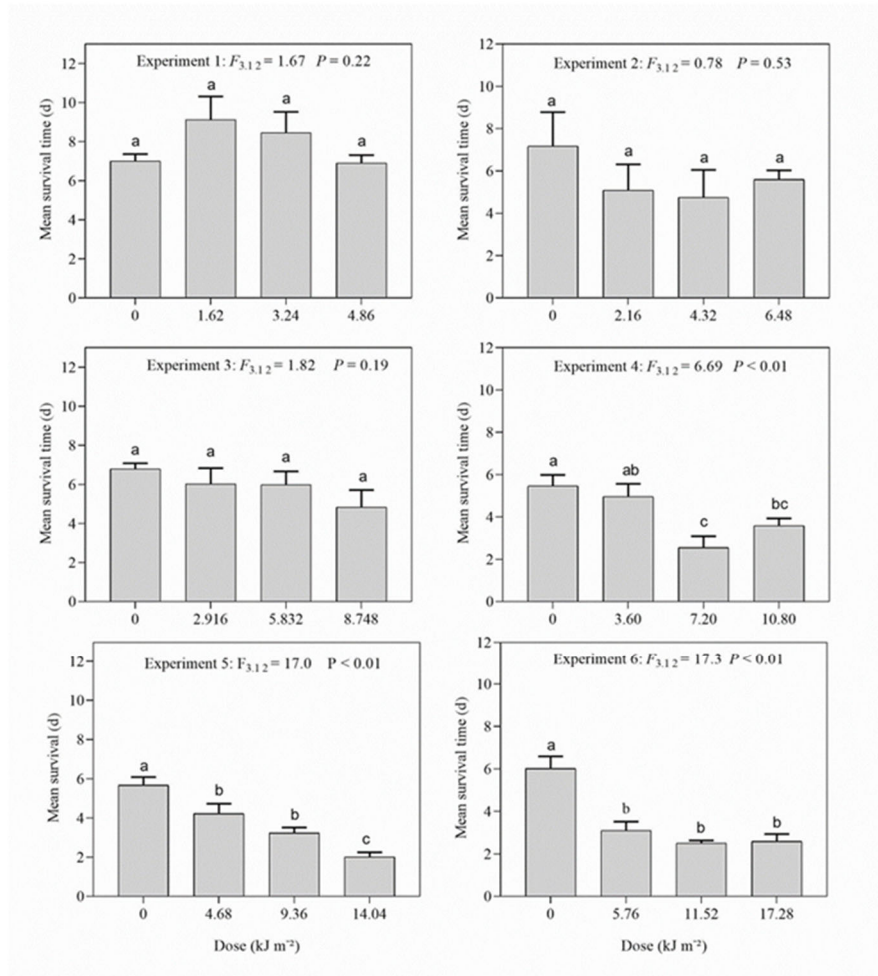


Figure S6. Effects of UV-B on survival of early instar nymphs of *D. citri* irradiated with UV-B. In the experiments the nymphs were irradiated daily at 0.45, 0.6, 0.81, 1, 1.3, and 1.6 W m<sup>-2</sup> for 60 or 180 min. The data are means ( $n = 4$ ; 20–100 nymphs per replication), and the bars represent the standard errors. Means annotated with different letters are significantly different from each other according to Duncan's MRT tests at  $p = 0.05$ .

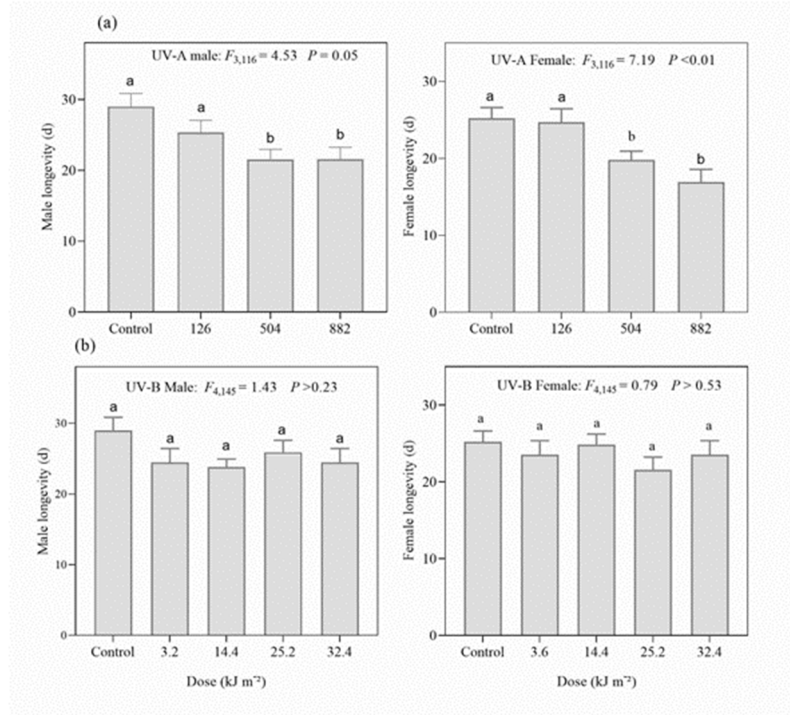


Figure S7. Effects of UV-A (a) and UV-B (b) on longevity of male and female adult *D. citri*. The adults were exposed daily to UV-A at  $35 \text{ W m}^{-2}$  for 1, 4, and 7 h or with UV-B at  $1 \text{ W m}^{-2}$  for 1, 4, 7, and 9 h each day until they died. The data are means ( $n = 30$ ), and the bars represent the standard errors. Means annotated with different letters are significantly different from each other according to Duncan's MRT tests at  $p = 0.05$ .

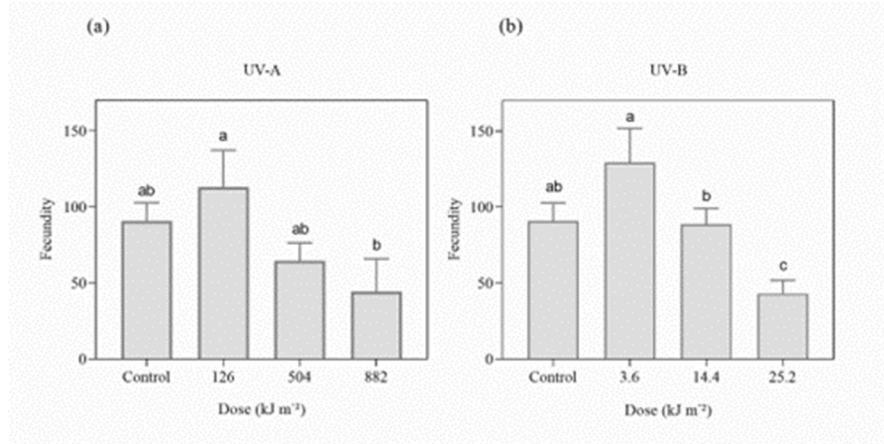


Figure S8. Effects of daily exposure to (a) UV-A at 35 W m<sup>-2</sup> for 0, 1, 4, and 7 h (b) and UV-B at 1 W m<sup>-2</sup> for 0, 1, 4, and 7 h on the fecundity of adult female *D. citri*; the insects were exposed until they died. The data are means (UV-A,  $n = 6-22$ ; UV-B,  $n = 7-27$ ), and the bars represent the standard errors. Means annotated with different letters are significantly different from each other according to Duncan's MRT tests at  $p = 0.05$ .

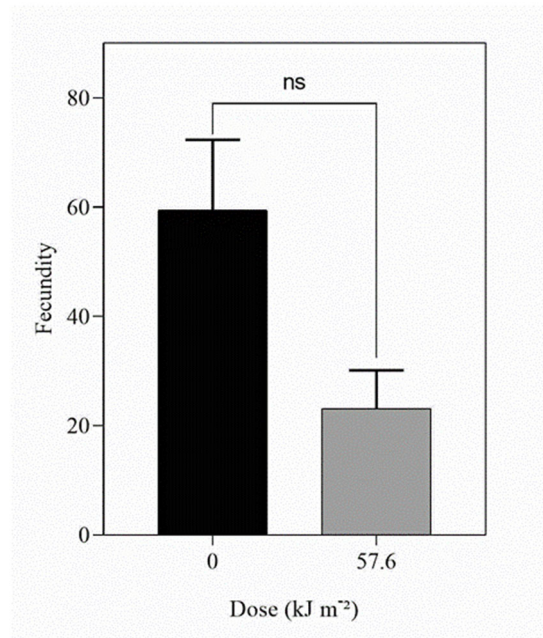


Figure S9. Effect of UV-B on the fecundity of female *D. citri* when treated for 16 h d<sup>-1</sup>. The data are means ( $n = 7-19$ ) and the bars represent the standard errors. Table S1. Effect of irradiation with UV-A on the F<sub>1</sub> generation. The data are means ( $n = 6-10$ ) and the bars represent the standard errors.



**Table S1.** Effect of irradiation with UV-A on the F<sub>1</sub> generation. The data are means (n = 6–10), and the bars represent the standard errors.

Dose (kJ m <sup>-2</sup> d <sup>-1</sup> )	Egg Hatch (%)	Nymphal Longevity * (Days)	Duration for Adult Eclosion (Days)	
			Male	Female
0	64.63 ± 2.66 a	5.50 ± 0.40 a	20.60 a	18.85 ab
126	63.33 ± 6.58 a	4.69 ± 0.31 a	19.50 a	21.25 a
504	66.52 ± 3.50 a	5.66 ± 0.60 a	19.28 a	17.00 b
882	19.66 ± 10.08 b			

Means annotated with different letters are significantly different from each other according to Duncan's MRT tests at  $p = 0.05$ . \* Irrespective of instar.

**Table S2.** Effect of irradiation with UV-B on the F<sub>1</sub> generation. The data are means (n = 10), and the bars represent the standard errors.

Dose (kJ m <sup>-2</sup> d <sup>-1</sup> )	Egg Hatch (%)	Nymphal Longevity * (Days)	Duration until Adult Eclosion (Days)	
			Male	Female
0	64.63 ± 2.66 ab	5.50 ± 0.40 ab	20.60 a	17.42 a
3.6	60.85 ± 1.30 ab	4.99 ± 0.36 b	20.50 a	19.00 a
14.4	69.47 ± 4.01 a	6.68 ± 0.80 a	20.67 a	20.33 a
25.2	60.03 ± 3.09 b	4.66 ± 0.22 b		

Means annotated with different letters are significantly different from each other according to Duncan's MRT tests at  $p = 0.05$ . \*Irrespective of instar.