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SUPPLEMENTARY MATERIAL

A multi-stressor environment impairs the photosynthetic performance of *Virescentia viride-brasiliensis* (Batrachospermales, Rhodophyta)

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Key words: Batrachospermales; red algae; chlorophyll *a* fluorescence; herbicide; IPCC; sugarcane crops; climate changes.

Tab. S1. Temperature values (ºC) and GPS coordinates of 10 streams in the Cervo River microbasin, used to determine the mean of measured temperatures (MMT) for the treatments and to calculate the experimental temperatures.

Stream	**Latitude**	**Longitude**	**Temperature**
01	22° 35' 22.9344" S	50° 24' 59.9436" W	22.08 ºC
02	22° 35' 33.3096" S	50° 25' 23.0232" W	22.34 ºC
03	22° 35' 22.2" S	50° 24' 45.3456" W	20.40 ºC
04	22° 34' 29.5932" S	50° 25' 6.6828" W	21.77 ºC
05	22° 38' 26.304" S	50° 20' 26.736" W	21.70 ºC
06	22° 38' 23.784" S	50° 19' 5.5092" W	21.21 ºC
07	22° 38' 31.2216" S	50° 12' 13.9824" W	20.37 ºC
08	22° 36' 38.1456" S	50° 27' 59.9292" W	21.68 ºC
09	22° 40' 12.6048" S	50° 28' 55.4088" W	22.23 ºC
10	22° 45' 29.0952" S	50° 31' 36.8112" W	22.07 ºC
MMT			**21.6ºC**

Tab. S2. Two-way analysis of variance (ANOVA-Two Way) results for Y(II) (Effective Quantum Yield in photosystem II), Y(NO) (Non-regulated non-photochemical energy loss in photosystem II), and Y(NPQ) (Regulated non-photochemical energy loss in photosystem II) parameters, considering tebuthiuron concentrations and global warming scenarios. Means followed by different uppercase letters in the rows and different lowercase letters in the columns differ significantly according to Tukey's *post-hoc* test (p<0.05).

Effective Quantum Yield in photosystem II - Y(II)

Tebuthiuron® treatment	Global warming scenario		
	Mt	4.5	8.5
Ct	0.125 ± 0.07 A/a	0.098 ± 0.06 A/a	0.145 ± 0.08 A/a
Tl	0.107 ± 0.04 B/a	0.043 ± 0.04 B/a	0.032 ± 0.03 B/a
Tm	0.012 ± 0.01 C/a	0.004 ± 0.00 C/a	0.019 ± 0.02 C/a
Th	0.001 ± 0.00 C/a	0.022 ± 0.02 C/a	0.011 ± 0.01 C/a

Regulated non-photochemical energy loss in photosystem II - Y(NPQ)

Tebuthiuron® treatment	Global warming scenario		
	Mt	4.5	8.5
Ct	0.339 ± 0.10 A/a	0.298 ± 0.08 A/a	0.277 ± 0.11 A/a
Tl	0.241 ± 0.07 B/a	0.240 ± 0.09 B/a	0.170 ± 0.11 B/a
Tm	0.148 ± 0.08 C/a	0.222 ± 0.07 C/a	0.127 ± 0.08 C/a
Th	0.129 ± 0.07 C/a	0.126 ± 0.11 C/a	0.085 ± 0.06 C/a

Non-regulated non-photochemical energy loss in photosystem II - Y(NO)

Tebuthiuron® treatment	Global warming scenario		
	Mt	4.5	8.5
Ct	0.537 ± 0.09 A/a	0.604 ± 0.08 A/ab	0.578 ± 0.11 A/b
Tl	0.653 ± 0.11 B/a	0.718 ± 0.09 B/ab	0.798 ± 0.11 B/b
Tm	0.840 ± 0.07 C/a	0.773 ± 0.07 C/ab	0.907 ± 0.08 C/b
Th	0.870 ± 0.07 C/a	0.851 ± 0.11 C/ab	0.904 ± 0.06 C/b

Tab. S3. Two-way analysis of variance (ANOVA-Two Way) results for Net Photosynthetic Rate (NPR) and Dark Respiration Rate (DRR), considering tebuthiuron concentrations and global warming scenarios. Means followed by different uppercase letters in the rows and different lowercase letters in the columns differ significantly according to Tukey's *post-hoc* test (œ<0.05).

Net Photosynthetic Rate - NPR			
Tebuthiuron® treatment	Global warming scenario		
	Mt	4.5	8.5
Ct	16.44 ± 8.21 A/a	43.95 ± 20.31 A/b	6.21 ± 1.55 A/ab
Tl	12.42 ± 9.34 AB/a	14.77 ± 12.48 AB/b	5.98 ± 1.96 AB/ab
Tm	14.24 ± 7.93 AB/a	2.99 ± 0.26 AB/b	4.30 ± 1.45 AB/ab
Th	8.71 ± 2.18 B/a	2.99 ± 1.73 B/b	2.59 ± 0.45 B/ab
Dark Respiration Rate (DRR)			
Tebuthiuron® treatment	Global warming scenario		
	Mt	4.5	8.5
Ct	20.94 ± 10.50 A/a	21.65 ± 12.70 A/a	6.32 ± 1.18 A/a
Tl	5.60 ± 3.29 B/a	5.59 ± 4.13 B/a	6.85 ± 3.48 B/a
Tm	3.87 ± 2.42 B/a	1.01 ± 0.20 B/a	5.54 ± 1.75 B/a
Th	1.97 ± 0.89 B/a	1.17 ± 0.60 B/a	2.85 ± 0.46 B/a