

This is a self-archived version of an original article. This version may differ from the original in pagination and typographic details.

Author(s): Rainio, Miia J.; Margus, Aigi; Lehmann, Philipp; Helander, Marjo; Lindström, Leena

Title: Effects of a glyphosate-based herbicide on survival and oxidative status of a non-target herbivore, the Colorado potato beetle (*Leptinotarsa decemlineata*)

Year: 2019

Version: Accepted version (Final draft)

Copyright: © 2018 Elsevier Inc.

Rights: In Copyright

Rights url: <http://rightsstatements.org/page/InC/1.0/?language=en>

Please cite the original version:

Rainio, M. J., Margus, A., Lehmann, P., Helander, M., & Lindström, L. (2019). Effects of a glyphosate-based herbicide on survival and oxidative status of a non-target herbivore, the Colorado potato beetle (*Leptinotarsa decemlineata*). *Comparative Biochemistry and Physiology Part C : Toxicology & Pharmacology*, 215, 47-55. <https://doi.org/10.1016/j.cbpc.2018.09.005>

Accepted Manuscript

Effects of a glyphosate-based herbicide on survival and oxidative status of a non-target herbivore, the Colorado potato beetle (*Leptinotarsa decemlineata*)

Miia J. Rainio, Aigi Margus, Philipp Lehmann, Marjo Helander, Leena Lindström



PII: S1532-0456(18)30132-7
DOI: doi:[10.1016/j.cbpc.2018.09.005](https://doi.org/10.1016/j.cbpc.2018.09.005)
Reference: CBC 8451

To appear in: *Comparative Biochemistry and Physiology, Part C*

Received date: 7 September 2018
Accepted date: 12 September 2018

Please cite this article as: Miia J. Rainio, Aigi Margus, Philipp Lehmann, Marjo Helander, Leena Lindström, Effects of a glyphosate-based herbicide on survival and oxidative status of a non-target herbivore, the Colorado potato beetle (*Leptinotarsa decemlineata*). *Cbc* (2018), doi:[10.1016/j.cbpc.2018.09.005](https://doi.org/10.1016/j.cbpc.2018.09.005)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Effects of a glyphosate-based herbicide on survival and oxidative status of a non-target herbivore, the Colorado potato beetle (*Leptinotarsa decemlineata*)

Miia J. Rainio^{1*}, Aigi Margus², Philipp Lehmann^{2, 3}, Marjo Helander¹, Leena Lindström²

¹⁾ Department of Biology, University of Turku, FI-20014 TURKU, FINLAND (email: Miia Rainio: miikoi@utu.fi, Marjo Helander: Helander@utu.fi)

²⁾ Department of Biological and Environmental Science, University of Jyväskylä, FI-40014 JYVÄSKYLÄ, FINLAND (email: Aigi Margus: aigi.margus@jyu.fi, Leena Lindström: leena.m.lindstrom@jyu.fi)

³⁾ Department of Zoology, University of Stockholm, 106 91 STOCKHOLM, SWEDEN (email: philipp.lehmann@zoologi.su.se)

*Corresponding author: Miia Johanna Rainio, Department of Biology, University of Turku, FI-20014 Turku, Finland. Tel.: +358 294 504248; Fax: + 358 2 333 6550; Email: miikoi@utu.fi

ACCEPTED MANUSCRIPT

