

Article

Energetic Value of *Elymus elongatus* L. and *Zea mays* L. Grown on Soil Polluted with Ni²⁺, Co²⁺, Cd²⁺, and Sensitivity of Rhizospheric Bacteria to Heavy Metals

Edyta Boros-Lajszner, Jadwiga Wyszkowska *, Agata Borowik and Jan Kucharski

Department of Soil Science and Microbiology, University of Warmia and Mazury in Olsztyn, Plac Łódzki 3, 10-727 Olsztyn, Poland; edyta.boros@uwm.edu.pl (E.B.-L.); agata.borowik@uwm.edu.pl (A.B.); jan.kucharski@uwm.edu.pl (J.K.)

* Correspondence: jadwiga.wyszkowska@uwm.edu.pl; Tel.: +48-89-5234938

Table S1. Microbial count (cfu) in 1 kg d.m. of the soil sown with *Elymus elongatus* L. and *Zea mays* L.

| Heavy metals | Org | Act | Fun |
|----------------------------|----------------------|----------------------|----------------------|
| | · 10 ⁸ | · 10 ⁶ | · 10 ⁶ |
| <i>Elymus elongatus</i> L. | | | |
| C | 35.320 ^d | 43.427 ^{bc} | 24.321 ^e |
| Ni ²⁺ | 44.584 ^a | 48.197 ^a | 36.136 ^d |
| Co ²⁺ | 35.738 ^{cd} | 45.968 ^{ab} | 35.177 ^d |
| Cd ²⁺ | 41.885 ^{ab} | 43.490 ^{bc} | 44.624 ^b |
| <i>Zea mays</i> L. | | | |
| C | 28.567 ^e | 43.531 ^b | 53.287 ^a |
| Ni ²⁺ | 33.943 ^d | 29.357 ^e | 40.892 ^c |
| Co ²⁺ | 28.328 ^e | 35.689 ^d | 43.889 ^{bc} |
| Cd ²⁺ | 39.779 ^{bc} | 40.110 ^c | 50.421 ^a |

Org – organotrophic bacteria; Act – actinobacteria; Fun – fungi. *C – control soil; Ni²⁺ – soil contaminated with nickel; Co²⁺ – soil contaminated with cobalt; Cd²⁺ – soil contaminated with cadmium. For each group of microorganisms, the same letters (a – e) are assigned to the same homogeneous groups.

Citation: Boros-Lajszner, E.; Wyszkowska, J.; Borowik, A.; Kucharski, J. Energetic Value of *Elymus elongatus* L. and *Zea mays* L. Grown on Soil Polluted with Ni²⁺, Co²⁺, Cd²⁺, and Sensitivity of Rhizospheric Bacteria to Heavy Metals. *Energies* **2021**, *14*, 4903. <https://doi.org/10.3390/en14164903>

Academic Editor: Firstname
Lastname

Received: 5 July 2021

Accepted: 9 August 2021

Published: 11 August 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).