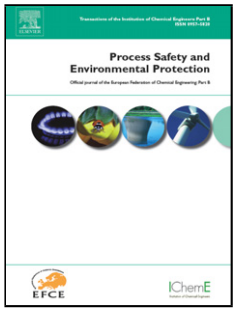


Title: Microcosm incubation study for monitoring the mid-term effects of different biochars on acidic sandy soil applying a multiparameter approach

Authors: Éva Farkas, Viktória Feigl, Katalin Gruiz, Emese Vaszita, Éva Ujaczki, Ildikó Fekete-Kertész, Mária Tolner, Csongor Márk Horváth, Zsófia Berkl, Nikolett Uzinger, Márk Rékási, Mónika Molnár

PII: S0957-5820(18)30728-6
DOI: https://doi.org/10.1016/j.psep.2018.08.027
Reference: PSEP 1497

To appear in: *Process Safety and Environment Protection*

Received date: 27-2-2018
Revised date: 20-8-2018
Accepted date: 20-8-2018

Please cite this article as: Farkas É, Feigl V, Gruiz K, Vaszita E, Ujaczki É, Fekete-Kertész I, Tolner M, Horváth CM, Berkl Z, Uzinger N, Rékási M, Molnár M, Microcosm incubation study for monitoring the mid-term effects of different biochars on acidic sandy soil applying a multiparameter approach, *Process Safety and Environmental Protection* (2018), https://doi.org/10.1016/j.psep.2018.08.027

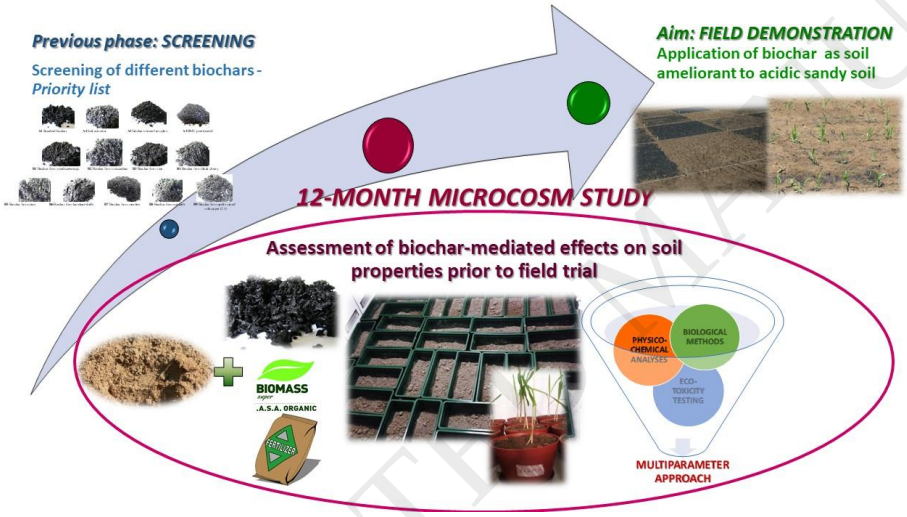
Microcosm incubation study for monitoring the mid-term effects of different biochars on acidic sandy soil applying a multiparameter approach

Éva Farkas[1*], Viktória Feigl[1], Katalin Gruiz[1], Emese Vaszita[1], Éva Ujaczki[1], Ildikó Fekete-Kertész[1], Mária Tolner[1], Csongor Márk Horváth[2], Zsófia Berkl[1], Nikolett Uzinger[3], Márk Rékási[3], Mónika Molnár[1]

[1] *Budapest University of Technology and Economics, Department of Applied Biotechnology and Food Science, Faculty of Chemical Technology and Biotechnology; Budapest, Műegyetem rkp. 3., HUNGARY*
[2] *Budapest University of Technology and Economics, Department of Mechatronics, Optics and Mechanical Engineering Informatics, Faculty of Mechanical Engineering; Budapest, Műegyetem rkp. 3., HUNGARY*
[3]*Institute for Soil Sciences and Agricultural Chemistry, Centre for Agricultural Research, Hungarian Academy of Sciences Budapest, Herman Ottó street 15., HUNGARY*

**Corresponding author's full address, phone and e-mail: 1111, Budapest, Műegyetem rkp. 3., HUNGARY, +36309737366, farkas.eva@mail.bme.hu*

Graphical abstract



HIGHLIGHTS

- Effects of biochars on soil properties were different in terms of extent and time.
- Multiparameter approach supported the selection of the most optimal treatment.
- 1% grain husk - paper fibre sludge biochar improved efficiently soil characteristics.
- 0.5% woodscreenings biochar with fertilizer was the most effective after 12 months.