



## Bioethanol production possibilities from hemp.

Kádár, Zsófia; Varga, Enik; Csoknyai, Balázs; Szijártó, Nóra; Nagy, Imre; Réczey, Kati

*Publication date:*  
2007

*Document Version*  
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

*Citation (APA):*

Kádár, Z., Varga, E., Csoknyai, B., Szijártó, N., Nagy, I., & Réczey, K. (2007). *Bioethanol production possibilities from hemp..* Poster session presented at 29th Symposium on Biotechnology for Fuels and Chemicals, Denver, CO, United States.

---

### General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

## BIOETHANOL PRODUCTION POSSIBILITIES FROM HEMP

Zsófia Kádár<sup>1,2</sup>, Enikő Varga<sup>1</sup>, Balázs Csoknyai<sup>1</sup>, Nóra Szijártó<sup>1</sup>, Imre Nagy<sup>2</sup>, Kati Réczey<sup>1</sup>

<sup>1</sup>Department of Agricultural Chemical Technology  
Budapest University of Technology and Economics  
Szt. Gellért ter 4., Budapest, 1111 Hungary

<sup>2</sup>Pólus Plus Co.  
Hunyadi János út 9., Budapest, 1117 Hungary

The EU's commitments to decrease the emission of „green-house” gases, to increase the renewable energy share in the whole energy consumption and to increase the renewable energy share in electrical energy, all have raised bioenergy to the significant position as one of the main sources of renewable energy.

Since Hungary is poor in cheap, clean, high-quality domestic energy resources and more than 50% of energy consumption is satisfied by imports, only biomass can currently be considered as a significant source of renewable energy. Due to the climate of the country it is highly diversified in agriculture crop production and suitable for energy plant production.

Hemp, which has been applied in this research, is a traditionally cultivated plant species in our country. The main advantages of this plant are, that can be cultivated in the back-warding regions possessing weak arable land conditions with low energy and pesticide requirements. Sweet sorghum is already a well-known and studied plant for biofuel production, while hemp can be stated as a novelty from this view. Hemp is a rapid growing (100-120 days), weed suppressing plant, and easily can be fit into crop rotation system. Among the field crops it has the highest biomass production with 15-17 t/ha (14% moisture content), which can make it competitive with energy woods.

Since our group has a long term tradition of research on utilization of lignocellulosic materials, our experiments aimed to examine main steps (pretreatment, hydrolysis, fermentation) of the conversion of hemp to ethanol, which results will be presented.