

Abstract



Mobilizing biomass feedstocks for advanced biofuels production

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Abstract:

Revitalization of marginal agriculture soils presents one of the main challenges of the Croatian and East European agriculture. One of the possible solutions for increasing biomass and bioenergy production could be the wide introduction of multiannual energy crop Miscanthus x giganteus in intensive agricultural cultivation. Miscanthus x giganteus is characterized by its ability to grow in different agroecological conditions, because the plant has low requirements during the growing and high yield production of lignocellulosic biomass. The main characteristics of grass Miscanthus x giganteus are: the possibility of growing on soils of lower quality, high resistance to various pests and diseases (no pesticide treatments), natural sterile hybrid (there is no risk for uncontrolled spreading in environment), small requirements for fertilizer, but high energy value (from 17.05 to 19.21 MJ/kg).

The aim of this presentation is to determine possibility of industrial cultivation of perennial lignocellulosic crop Miscanthus x giganteus on poor quality, contaminated or marginal agricultural lands. Only in EU there are around 30 % of marginal agricultural lands which can give the opportunity to produce various types of biofuels without competition with current food production. Furthermore, the advantages of perennial lignocellulosic crop cultivation over collecting and utilizing traditional agricultural residues will be shown

Biography:

Goal-oriented professional whose expertise are biomass value chains from energy crops, technological solutions for energy crops growing and handling with special emphasis on optimizing the supply logistics and use of biomass over time.

As an official representative and project team leader of the BEE-CO, he is responsible for establishment of Miscanthus x giganteus plantations, building feedstock supply chains and "turn key" solutions for agricultural biomass market development, building communication network with government institutions and officials as well as consulting and bridging the agrisuppliers and industrial end users/consumers.



Tomislav graduated with the highest honor at the Faculty of Agriculture in Zagreb. Prior to joining the Company, he was professionally qualified in the City Office for Agriculture and Forestry of City of Zagreb.

Recent Publications:

- 1: Blackshaw R.E., Moyer J.R., Doram, R.C., Boswell A.L. (2001). Yellow sweetclover, green manure, and its residues effectively suppress weeds during fallow. Weed Science 49 (3): 406–413.
- 2: Creamer N.G., Bennett M.A., Stinner B.R., Cardina J., Regnier E.E. (1996). Mechanisms of weed suppression in cover cropbased production systems. HortScience 31 (3): 410–413.
- Haramoto E.R., Gallandt E.R. (2004). Brassica cover cropping for weed management: A review. Renewable Agriculture and Food Systems 19 (4): 187–198.
- 4: Hoffman M.L., Regnier E.E. (2005). Contribution to Weed Suppresion from Cover Crops. In: Sustainable Weed Management (Singh H.S., Batish D.R., Kohli R.K., eds.). pp 51-75.
- 5: Hoffman M.L., Regnier E.E., Cardina J. (1993). Weed and corn (Zea mays) responsees to a hairy vetch (Vicia villosa) cover crop. Weed Technology 7: 594-599.

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