



Impact of climate change on aviation biofuel production

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Production of bio kerosene is rapidly growing, driven by international efforts to reduce dependence on oil, promote a cleaner environment and protect climate. Biomass is the main feedstock of biofuels, is derived from farming and forestry. It is the fourth source of primary energy after oil, coal and gas.

Drawing from industrial, institutional and academic sources this report summarizes some of the new statistics and trends, and provides an update of current climate scenarios and technologic and strategic solutions to developments in bio kerosene production.

The theses are the followings:

1. Energy plants for bio kerosene production must avoid the competition to food industry
2. Short rotation energy coppices contained a high lignin concentration, are important for sustainable bio kerosene production
3. Climate change causes more extreme weather situation in the most regions of the Earth.
4. Especially drought can intensively decrease biomass production on the World in the next decades
5. Because of climate change exotic cultures will gain on importance in a lot of regions of the world which must be checked under agrobiological safety aspects
6. Irrigation will be more and more decisive for optimal growing and harvesting energy crops
7. Preprocessed and cleaned municipal waste water can be used for irrigation
8. CO₂ balance of energy plants must be improved in the whole production process chain
9. Mobile black liqueur devices can increase the economically and ecologically justifiable transport distances between agricultural and industrial are.
10. Use of renewable energy sources during producing and processing of biomass for bio kerosene must be forced.



Professor Palocz-Andresen has been a whole professor for Environment and Climate Protection at the University West Hungary Sopron (Oedenburg) since 2005. For the Leuphana University Lueneburg (Germany) he has been a visiting professor for Sustainable Transportation since 2011. At the Shanghai Jiao Tong University he has been a visiting professor since 2014 and at the TU Budapest a honorary professor since 1997.

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