

**Biomass and bioenergy production in organic agriculture – consequences for soil fertility, environment, spread of animal parasites and socio-economy (BioConcens)**

The production of bioenergy from local biological resources and the maintenance of soil fertility have traditionally been regarded as opposing aims in organic agriculture. It is, however, important to reduce the reliance on fossil fuels and decrease greenhouse gas emissions in organic agriculture, especially in the context of enhanced integrity of organic agriculture.

BioConcens is an interdisciplinary project aiming at developing new methods and processes for co-production of bioethanol, biogas and animal feed based on resources from organic agriculture and associated food processing and suggests the outline for a medium-sized plant for co-production of biogas, bioethanol, and animal feed. The project also designed and tested a new cropping system for biomass production to be used for bioenergy, while at the same time safeguarding soil quality. The project also investigated the effects of remains from bioenergy production on soil fertility, the microbial community, greenhouse gas emissions, survival of parasites and weed seeds in the manure as affected by bioenergy production.

The results gained by BioConcens constitute a considerable contribution to the knowledge base needed for the development towards integrating the utilization of biomass for local bioenergy production in organic farming systems. For more specific results obtained in BioConcens see website link below.

Department of Environmental Science at Aarhus University contributed with analysis of soil microbial communities (impact on diversity and function) and survival of weeds and pest in biogas plants.

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Project website: [http://www.icrofs.dk/Sider/Forskning/foejolll\\_bioconcens.html](http://www.icrofs.dk/Sider/Forskning/foejolll_bioconcens.html).