

Joint Egypt-German Research in the project CEMUWA (Climate protection, natural resources management and soil improvement by combined Energetic and Material Utilization of lignocellulosic agricultural Wastes and residues)

In Egypt arises significant emissions caused by the burning of rice straw on the field of about 3 million Mg annual, essential nutrients and organic matter are lost. Also in Germany the surplus straw is mostly energetic unused. The combined energetic and material utilization of (rice) straw can realize an important contribution to climate protection and resource conservation.

In the project "CEMUWA", Egyptian and German researches work together to develop a technology for agricultural waste and residues as contribution to climate protection and natural source management. It is founded by the German BMBF and the Egyptian STDF and runs from 2011 until 2013.

Researchers from the Egyptian Agriculture Research Center (ARC), Ministry of Agriculture with the involved departments (Central Laboratory for Agricultural Climate (CLAC) and Agricultural Engineering Research Institute (AENRI)) are focused on the material use and the production of bioethanol from rice straw. The German partners, the Rostock University and the company S.I.G. - DR.-ING. STEFFEN GmbH, researches on the best way to convert rice straw into biogas or butanol. Despite the difficult political conditions, our project is running smoothly from the project start in 2011 until now. First positive results were found. At several meetings and workshops in Cairo and Rostock the newest results and next steps were discussed. The visits gave all participants also an in-depth look and better understanding of the conditions and also problems for the implementation for bioenergy and climate protection in each country. Next steps are to test the best variants in a middle scale reactor (ethanol) respectively in a continuous biogas test. Finally technical concepts for the material and energetic utilization of rice straw are developed.



Visit of the greenhouse trails with rice straw as growing substrate at the Agriculture Research Center in Cairo (November 2012)