



## Sustainable Development and Environment of Biomass from Agriculture Residues

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### Abstract:

The demand for energy continued to outstrip supply and necessitated the development of biomass option. Residues were the most popular forms of renewable energy and currently bio-fuel production became much promising. Agricultural wastes contained high moisture content and could be decomposed easily by microbes. Agricultural wastes were abundantly available globally and could be converted to energy and useful chemicals by a number of microorganisms. Compost or bio-fertiliser could be produced with the inoculation of appropriated thermophilic microbes which increased the decomposition rate, shortened the maturity period and improved the compost (or bio-fertiliser) quality. The objective of the present research was to promote the biomass technology and involved adaptive research, demonstration and dissemination of results. With a view to fulfill the objective, a massive field survey was conducted to assess the availability of raw materials as well as the present situation of biomass technologies. In the present communication, an attempt had also been made to present an overview of present and future use of biomass as an industrial feedstock for production of fuels, chemicals and other materials. We may conclude from the review paper that biomass technology must be encouraged, promoted, invested, implemented, and demonstrated, not only in urban areas but also in remote rural areas.

(1) The biomass energy, one of the important options, which might gradually replace the oil in facing the increased demand for oil and may be an advanced period in this century. Any county can depend on the biomass energy to satisfy part of local consumption.

(2) Development of biogas technology is a vital component of alternative rural energy programme, whose potential is yet to be exploited. A concerted effect is required by all if this is to be realised. The technology will find ready use in domestic, farming, and small-scale industrial applications.

(3) Support biomass research and exchange experiences with countries that are advanced in this field. In the meantime, the biomass energy can help to save exhausting the oil wealth.

### Biography:

Abdeen Mustafa Omer (BSc, MSc, PhD) is an Associate Researcher at Energy Research Institute (ERI). He obtained both his PhD degree in the Built Environment and Master of Philosophy degree in Renewable Energy Technologies from the



University of Nottingham. He is qualified Mechanical Engineer with a proven track record within the water industry and renewable energy technologies. He has been graduated from University of El Menoufia, Egypt, BSc in Mechanical Engineering. His previous experience involved being a member of the research team at the National Council for Research/Energy Research Institute in Sudan and working director of research and development for National Water Equipment Manufacturing Co. Ltd., Sudan. He has been listed in the book WHO'S WHO in the World 2005, 2006, 2007 and 2010. He has published over 300 papers in peer-reviewed journals, 200 review articles, 7 books and 150 chapters in books.

### Publication of speakers:

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