Kasalanati Prabhakar, J Fundam Renewable Energy Appl 2017, 7:4(Suppl)
DOI: 10.4172/2090-4541-C1-029

Pyrolysis of coconut shell and its potential as fuel

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The pyrolysis of coconut shell in experimental conditions at different temperatures for varying time periods, to determine the suitable range for obtaining maximum percentage yield of charcoal was studied. Pyrolysis under field conditions has been done to compare the percentage yield efficiency of charcoal with experimental results. The efficiency of pyrolysis in experimental conditions at a temperature of 300 degree Celsius and 180 seconds' time duration is 70%, while in field conditions the efficiency recorded is 27%. Coconut shell with a yield potential of 2 tonnes per hectare per year in India can fulfill the cooking and heating requirements of two families, with five members each, in rural areas.

Biography

Kasalanati Prabhakar is a Post-graduate in Agriculture. He pursued Doctorate in Biomass Conversion Technologies at Indian Institute of Technology Delhi, New Delhi, India. He worked at Acharya N G Ranga Agricultural University, Hyderabad, India as Professor. He has supervised thesis work of a number of research scholars in Bioenergy and has a number of research papers to his credit. He contributed to the research in biomass conversion technologies mainly in pyrolysis of agricultural wastes and forest biomass. He designed a portable kiln for manufacturing charcoal at village level. He has experience in gasification of charcoal and smokeless stoves as well. In addition, he has experience in biofuels and solar power in irrigation systems.

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