

ENERGY & ENVIRONMENT

0601–268. Datta SK, Pandey RK (Botanic Garden Floriculture, Natl Botanical Res Inst, Rana Pratap Marg, Lucknow 226001). **Cultivation of *Jatropha curcas* : a viable biological resources.** *J Rural Techno*, **1**(6) (2005), 299–303 [19 Ref].

Jatropha curcas has been reported as an efficient substitute fuel for diesel engine. The seed oil is non-edible and capable of growing on waste lands so that its cultivation does not exert any pressure on agricultural land. It can easily be grown by seeds and stem cuttings. Paper suggests that the proper isolation, evolution, selection, and improvement of *J. curcas*, a sustainable oil seed plantation can be made feasible for commercial exploration.

0601–269. Kirubakaran V, Sivaramakrishnan V, Premalatha M, Subramanian P (Cent Energy Environ Sci Techno, Natl Inst Techno, Tiruchirapalli 620015). **Investigation of energy recovery from poultry litter and municipal solid waste by thermochemical conversion method in India.** *J Environ Sci Engng*, **47**(4) (2005), 266-275 [13 Ref].

Paper describes the various technologies need to be adopted for the disposal of poultry waste and municipal solid waste. More emphasis has to be given on waste disposal technologies to recover energy from organic fractions of wastes by applying suitable processing and treatment techniques for better environment and economics. The advantages and disadvantages of each disposal technology have been briefed.

0601–270. Kumar Anuj, Miglani P, Gupta RK, Bhattacharya TK (Dept Environ Sci, GB Pant Univ Agricul Techno, Pantnagar 263145). **Impact of Ni(II), Zn(II) and Cd(II) on biogassification of potato waste.** *J Environ Bio*, **27**(1) (2006), 61-66 [23 Ref].

A study was conducted on anaerobic digestion of potato waste and cattle manure mixture, inoculated with 12% inoculum and diluted to 1:1 substrated water ratio at $37\pm 1^\circ\text{C}$. Biogas production continued upto 10 and 7 days, when lime and sodium bicarbonate solutions were used to adjust the pH, respectively. Biogas production rate was higher when potato waste and cattle manure were used in 50:50 ratio. Effect of two different concentrations (2.5 and 5.0 ppm) of three heavy metals viz. (Ni (II), Zn (II) and Cd (II)) on anaerobic digestion of substrate (potato waste-cattle manure, (50:50) was studied.

0601–271. Rahman H, Phadatare AG, Sahu RK (Agri Fd Engng Dept, Indian Inst Techno, Kharagpur 721302). **Karanja esterified oil : an alternative renewable fuel for**

diesel engines in controlling air pollution. *J Rural Techno*, **1**(6) (2005), 299–303 [12 Ref].

Paper presents the results of investigations carried out in studying the fuel properties of esterified karanja oil and its blend with diesel fuel from 20% to 80% by volume and in running a diesel engine with these fuels. The reduction in exhaust emissions together with increase in torque, brake power, brake thermal efficiency, and reduction in brake specific fuel consumption made the blends of karanjan esterified oil (B 20 and B 40) a suitable alternative fuel for diesel and thus could help in controlling air pollution.