International Energy Initiative
-Asian Regional Energy Initiative

News from IEI's Asian Regional Initiative in Bangalore (India) – September 2013

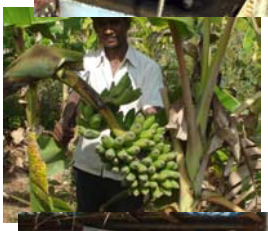
"Value-addition to food crop processing: converting banana plant-waste to cooking fuel"

IEI-Asia has been implementing options of an "energy-development" model that **integrates** ***economically-feasible income and employment generating activities*** with ***cleaner and/or more efficient energy services***. This particular project, as its name implies, adds value to farming by introducing resource-efficient cultivation of a cash-earning food-crop – bananas. As importantly, the plant-waste from the fields is used as renewable substrate for biogas generation, with the gas being supplied to the surrounding homes as cooking fuel. Apart from increased food production and clean cooking fuel, the increased activities (at the farms and the biogas plants) improve livelihood.

After installation of efficient micro-irrigation (drip) systems on 6 acres of small farms in Ramanagara district, of Karnataka state (south-west India), banana-plantations were developed.

Floating-drum biogas digesters were constructed adjacent to these plantations. Residues from the banana cultivation -- pseudo-stems from among the standing plants and the main stalk after harvests -- are being chopped and fed daily to the digesters.

Biogas (chiefly methane) is being accumulated in the gas-holders through anaerobic digestion. Details are being recorded for the purposes of study and future replication.



The gas-holders have been linked by piping to surrounding households, so that they can be supplied with the gas as cooking fuel. Gas supply has just been commenced on a trial basis for a few hours a day in the nearest homes. It will be extended, based on the experiences with these homes.

Meanwhile, bananas are being taken to the *sante* (wholesale produce market) nearby as the fruit matures. The net revenue from banana cultivation is being recorded and will be used towards recovery of the system costs. This project is being funded mainly by the Wuppertal Institute for Climate, Environment and Energy, through the 7th round of their Sustainable Energy Project Support (SEPS) programme.