

S. No.	Item	Detail
1.	Name of the technology	<b>Briquetting of agro-residues</b>
2.	Specification and salient features	The briquetting plant consists of a hammer mill (with 15 hp motor) for grinding of biomass, a screw conveyor for feeding the grinded biomass and ram and die type briquetting press (with 30 hp motor). The commercially available die suitable for saw dust (60 mm diameter) was modified to suit agro-residues. The die taper-ness modification was undertaken to make briquettes from soft leafy biomass with less lignin (for example soybean straw) require the higher compaction for making briquettes.
3.	Performance result	The briquetting capacity of the plant for agro-residue was 320-350 kg/h. The biomass forced through the taper die with high pressure (160-180 kg/cm <sup>2</sup> ) and temperature (140-150°C). The energy consumption in briquetting was 0.08-0.1 kWh/kg briquettes produced. The optimum moisture content of the biomass was 10-12% for briquetting purpose. The true density of the briquettes were 1050-1150 kg/m <sup>3</sup> . The calorific value of the biomass briquettes were 3600-4000 kcal/kg.
4.	Cost	Initial investment : Rs 15,00,000/- Operating cost: Rs 2.0/kg
5.	How the new technology will impact the income of the farmer and its benefit over conventional system	Presently many surplus agro-residues are burnt in the field. Briquetting will add the value to the agro-residues. Market price of the biomass briquettes is about Rs 4/kg, whereas processing cost is Rs 1.0/kg. The farmer can get up to Rs 1.0/kg of the agro-residue.
6.	Social/environmental benefits	Utilization of agro-residues and other surplus biomass for briquetting will help in to reduction in burning of the biomass and revenue gain to the farmers. will reduce pollution to atmospheres.
7.	Status of commercialization / IPR right etc.	Ready for commercialization.
8.	If commercialized, name and address of the firm	-
9.	Special facilities required	Nil
10.	Photograph	
11.	Contact person	Director, Central Institute of Agricultural Engineering, Nabibagh, Berasia road, Bhopal-462038 (MP) Ph: 0755-2521133, email: directorciae@gmail.com
12.	Source of availability	-do-