

Category	: International Rice Research Conference
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Title of Entry	: Indian farmers' perception of rice straw management: Opportunities for tapping rice residue as an alternative source of energy
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Select only one type of presentation	: 15 minute oral presentation
Abstract	: Globally, rice straw contributes 34.3% of total residue production. In India, 150 million tons of rice straw is produced each year, which translates to more than 40% of the total agricultural residue. In the past decade, rice straw burning has become a national concern due to its short- and long-term negative implications for agriculture, environment and human health. Despite numerous State and Central government efforts, burning is still common. However, rice straw has immense potential to create bioenergy. Several technologies are now available for producing energy products from rice straw, but scaling up has been a challenge. It is imperative to understand farmers' perspectives on rice straw as an alternative source of energy because they are directly involved in production and management practices. This study explored different sources of energy use by rural households; usage patterns of rice straw; and deeper understanding of farmers' perception of barriers, trade-offs, and opportunities for the use of rice straw as an alternative source of energy. Focus Group Discussions (FGD) and stakeholders' analysis were conducted in Punjab and Haryana states in Northwest India and in Odisha, West Bengal, and Bihar states in Eastern India. Key findings show that energy use varied across states and there exist gaps between energy access and supply across regions. Cultural traditions and belief systems determined straw management, as it is based on how farmers "constructed" the value of rice straw and its usage. Factors including time constraints posed by the rice-wheat system, crop-livestock interaction, labour shortages and level of mechanization, influenced the decision-making process of farmers. Burning was the only option available to farmers due to the lack of awareness and of access to various straw use and management practices. Our study suggests that training and exposure to various straw management practices, development of

relevant business models and value addition of straw linked to livelihood options, and development of market opportunities are the key areas to explore for effective use of straw as an alternative source of energy.

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