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## Development of a technology roadmap for biogas production from straw

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**Statement of the Problem:** Technology roadmap is a strategic tool that outlines the steps that an organization should follow to achieve the results and stated objectives. It describes clearly links between tasks and priorities for action in the short, medium and long term and presents an effective script that connects technology, products and markets at high levels of abstraction. As a result, the technological state of the Company can be maintained or improved. The process to obtain biogas is mainly used for the disposal of organic waste such as lignocellulosic residues and is being promoted as an energy source of low-carbon and potentially capable of reducing the dependence on fossil fuels. This research aims at the development of a technology roadmap related to biogas production from lignocellulosic waste.

**Methodology & Theoretical Orientation:** Research in specialized media publications, scientific articles, patents applied for and granted; these technical documents were submitted to a detailed analysis of various criteria such as year of publication, country of origin, type of author, study focus and the development of taxonomies related to the analyzed content. This analysis was organized in the technological map, at different time periods, according to the selected taxonomies.

**Findings:** The majority of players were Chinese ones. Also, multinational players specialized in unrelated areas and not known for biogas production have appeared in more than one period, whose documents had distinct approaches, possibly elucidating possible long term strategies.

**Conclusion & Significance:** There was an increased investment in R&D carried out by China in this technology in comparison to the rest of the world, although hardly any patents were applied in foreign countries. The pre-treatment for process viability and presents an important strategic planning tool for decision-making of the different players in the industry.

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