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## Manufacturing of Ethanol from Maize

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Abstract: India is a developing economy, and an energy-hungry state. With its ever increasing demand for fuel, India is the fourth largest consumer of crude oil in the world and imports 70% of its total demand. Also, to reduce the carbon footprint, the search is on for eco-friendly and renewable sources of energy. In India, one such unconventional fuel is ethanol produced from sugarcane molasses and blended with gasoline for use as biofuel. The present paper propose an entrepreneurial project to produce ethanol from maize, with an objective to develop a clean & green source of energy and to give a boost to the agricultural economy. Maize is the third most important crop in India, with approximate 85% of areal coverage. Ethanol produced from maize has advantages over sugarcane, as the fibrous byproduct makes an excellent animal feedstock and can be further processed for the production of corn starch and syrup, to maximize the profit. The present paper suggests an entrepreneurial opportunity for commercial production of ethanol from maize directly purchased from farmers.

Keywords: Maize, Ethanol, Dry-grinding, Fermentation

## REFERENCE

- [1]. Research paper on Structural changes of corn starch during fuel ethanol production from corn.
- [2]. Website:-http://www.biotechnologia-journal.org/ DATE 3/2012 issue.
- [3]. Research Paper on Microorganism and maintenance: Improvement of ethanol production from sugarcane molasses throughen hanced nutrient supplementation using Saccharomyces cerevisiae. Page 2
- [4]. Sugar Fermentation to Ethanol: Breaking the Biological Barriers to Cellulosic Ethanol Pages 1,2and 3.
- [5]. Wikipedia: Ethanol History. Website: http://en.wikipedia.org/wiki/Ethan ol
- [6]. Standardization of conditions for fermentation: Page 1 and 2.
- [7]. F. Taheripour, W.E. Tyner, Induced land use emissions due to first and second generation biofuels and uncertainty in land use emission factors, Econ. Res. Int. (2013) 1e12.
- [8]. US EPA Transportation Office Air Quality Standards Division, Draft Regulatory Impact Analysis: Changes to Renewable Fuel Standard Program, 2009. http://
- [9]. Biochemical Engineering Fundamentals (2nd Ed) by J.E Bailey and D.Ollis, McGraw-Hill Book Company.
- [10]. Bothast R.J. and Schlicher M.A. (2005). Biotechnological processes for conversion of corn into ethanol. Appl Microbiol Biotechnol. 67: 19-25

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