



UP became the First State in Ethanol Production

Why in News?

Uttar Pradesh has **topped** the country in the field of **ethanol production** . In the last eight years, the **state has increased its production capacity to 2 billion liters per year** and a target is to increase it to 2.5 billion liters per year in the future.

Key Points

- **Benefits:**
 - Increase in ethanol production has led to better prices and increased income to sugarcane farmers. Ethanol production is leading to the establishment of new industries in the state, providing employment to thousands of people. This is boosting economic activities in rural and urban areas.
 - Promoting the use of **Ethanol-Blended Petrol (EBP)** will reduce dependence on petrol and diesel and also reduce pollution. Along with this, it will also help in achieving the target of [net-zero emission by the year 2070](#) .
 - **Asia's largest ethanol plant has been set up** in **Gonda district** and an ethanol production plant has also been set up at **Pipraich sugar mill in Gorakhpur** .
- **Biofuel Policy-2022 :**
 - The state government prepared a well-planned Biofuel Policy-2022 to promote **Ethanol Blended Petrol (EBP)** .
 - The main objective of this policy is to **increase the income of farmers and make the environment clean**.
 - This policy is proving to be an important step towards transforming the state into a major hub of [biofuel](#) .

Ethanol

- Ethanol, also known as **ethyl alcohol**, is a **biofuel produced** from various sources such as sugarcane, corn, rice, wheat and biomass .
- **Molasses**, a by-product of sugar manufacture, is usually the main source for the production of **ethanol (anhydrous alcohol) and rectified spirit** . Molasses can be classified into the following categories:
 - **Grade A Molasses:** An intermediate by-product obtained from the initial sugar crystal extraction , containing 80-85 % dry matter (DM) .
 - **B grade Jaggery:** Same DM content as A grade Jaggery but with less sugar and no spontaneous crystallisation.
 - **Class C Molasses (Blackstrap Molasses, Treacle):** The final by-product of sugar processing , containing significant amounts of sucrose (about 32% to 42%) . It does not crystallize and is used as a commercial feed ingredient in either liquid or dry form.
- The production process involves the fermentation of sugars by yeast or through petrochemical processes such as ethylene hydration.
- Ethanol is 99.9% pure alcohol that can be blended with petrol to create a clean fuel option .

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