



Conversion of Surplus Rice to Ethanol

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Why in News

Recently, the **Central government** has allowed the **conversion of surplus rice to ethanol**.

- Ethanol produced from this will be used for **utilisation in making alcohol-based hand sanitizers** and **blending in petrol**.
- Ethanol is one of the most variable alternatives amongst **biofuels**.

Key Points

- The **National Biofuel Coordination Committee (NBCC)** took the decision which will lead to utilisation of part of a **huge stockpile of 30.57 million tonnes (MT) of rice** which is **almost 128% more** than the buffer stock and strategic requirement norms.
At present, the **Food Corporation of India (FCI)** has huge rice stock from previous years excluding the unmilled paddy lying with millers on behalf of FCI.
- Using surplus rice for ethanol will **address the concern of about 750 million litres of grain-based distillery capacities lying idle**, due to the **lack of feedstock**.
In India, the **total capacity of grain-based distilleries** is **close to 2 billion litres**, of which around **38% (750 million litres) was lying unused**.
- The **National Policy on Biofuels, 2018** allows **conversion of surplus quantities of food grains to ethanol** when there is a projected oversupply of food grains.

Major Criticism

- This move has been **criticised** on the grounds that **how can the government waste food stock for fuel** when the considerable number of the population **doesn't have food** and is **suffering from malnutrition**.
- On 26th March 2020, the government decided to give 5 kg wheat or rice and 1 kg of preferred pulses free of cost to 800 million people, under the **National Food Security Act, 2013 (NFSA)** in the wake of the **Covid-19 pandemic**.
 - However, **many poor people are unable to get the benefit out of it**, due to loopholes in the PDS network.
 - For example, a large chunk of **ration card holders may not be eligible for the free grains**, as they are not covered under the NFSA.
 - The **NFSA, based on the 2011 census**, had not **factored in the population increase in over nine years**, leaving a huge number of people out of its ambit.

National Policy on Biofuels, 2018

- It **categorises biofuels in various categories** to enable extension of appropriate financial and fiscal incentives under each category.
 - **Basic Biofuels** or **First Generation (1G)**: Bioalcohols, Biodiesel, etc.
 - **Advanced Biofuels** or **Second Generation (2G)**: Ethanol, Municipal Solid Waste (MSW) to drop-in fuels, etc.
 - **Third Generation (3G)**: Butanol.
 - **Fourth Generation (4G)** : Fuel from genetically engineered crops.
- It **expands the scope of raw material for ethanol production** by allowing use of sugarcane juice, sugar containing materials like sugar beet, sweet sorghum, starch containing materials like corn, cassava, damaged food grains like wheat, broken rice, rotten potatoes which are **unfit for human consumption**.
- **Objective:**
 - To achieve **20% ethanol-blending** and **5% biodiesel-blending** by the year **2030**.
 - It also **expands the scope of feedstock** for ethanol production and has provided for **incentives for production of advanced biofuels**.

National Policy on Biofuels 2018

Salient features



An indicative target of **20%** blending of ethanol in petrol and **5%** blending of biodiesel in diesel is proposed by 2030.



With a thrust on **Advanced Biofuels**, the Policy indicates a viability gap funding scheme for **2G ethanol Bio refineries** of **Rs.5000 crore in 6 years** in addition to additional tax incentives, higher purchase price as compared to **1G biofuels**.



Categorization of Biofuels into **Basic Biofuels** - First generation(1G) Bioethanol & biodiesel and "**Advanced Biofuels**"- Second Generation(2G) ethanol, drop-in fuels, **algae based** Third Generation(3G) Biofuels.



Increase scope of raw material for ethanol procurement by encouraging Intermediate (**B-Molasses**), Sugarcane Juice, other Sugar containing materials and damaged as well as surplus food grains.



Develop **National Biomass repository** by conducting **appraisal of biomass** across the Country.



Bio diesel production to be encouraged from non edible oilseeds, **used cooking oil**, short gestation crops and development of supply chain mechanisms.



Thrust on **research, development and demonstration** in the field of **Biofuel feedstock** production, advanced conversion technologies from identified feedstock.



Setting up of **National Biofuel coordination committee (NBCC)** under **Ministry of Petroleum & Natural Gas** and Working Group on Biofuels.



Source: BS