ETHANOL BLENDED PETROL : ENVIRONMENT

NEWS: Centre approves additional 2.8 million tonnes of FCI rice for ethanol production

WHAT'S IN THE NEWS?

The government's allocation of 5.2 million tonnes of FCI rice for ethanol production under the EBP Programme aims to boost green fuel goals but raises serious concerns over food security, water use, and agricultural sustainability.

Context:

- The Union Government approved an additional 2.8 million tonnes of rice from the Food Corporation of India (FCI) stock for ethanol production under the Ethanol Blended Petrol (EBP) Programme.
- This raises the total rice allocation for Ethanol Supply Year (ESY) 2024–25 to 5.2 million tonnes.
- The move has reignited debates over the trade-off between food security and energy security.

What is Ethanol and the Ethanol Blended Petrol (EBP) Programme?

1. Ethanol:

- A biofuel (alcohol) produced through fermentation of:
- Sugar/starch-based crops: sugarcane, maize, rice
- Cellulose-based feedstock: agricultural residue, non-edible biomass
- When blended with petrol, ethanol:
- Reduces carbon emissions
- Decreases reliance on fossil fuels

2. EBP Programme:

- Launched in 2003; aggressively expanded post-2014.
- Mandates blending of ethanol with petrol to reduce fossil fuel dependence.
- Targets:
- E20 (20% ethanol blending) by 2025 – already achieved

- E30 (30% blending) by 2030
- Implemented by the Ministry of Petroleum and Natural Gas, in coordination with FCI, OMCs, and sugar mills/distilleries.

Significance of the Decision to Use FCI Rice for Ethanol Production

1. Enhancing Energy Security:

- Reduces India's dependence on crude oil imports.
- Supports self-reliant fuel production using domestic feedstocks.

2. Environmental Benefits:

- Ethanol burns cleaner than petrol, resulting in:
- Lower carbon monoxide and hydrocarbon emissions
- Contribution to climate change mitigation goals

3. Support to Rural Economy:

- Increases demand for surplus agricultural produce, especially during surplus years.
- Enables income diversification for farmers through ethanol-linked procurement.

4. Policy Alignment:

- Supports India’s goals under the Paris Agreement and National Bioenergy Policy.
- Encourages transition to green, renewable energy and reduces carbon intensity of transport fuels.

Concerns and Criticisms Regarding the Move

1. Risk to Food Security:

- Diverting 5.2 million tonnes of rice could affect Public Distribution System (PDS) availability.
- Especially problematic during drought years, crop failures, or high inflation periods.

2. Price Distortion:

- FCI sells rice to distilleries at ₹22.50/kg, far below market value.

- This may lead to shortages or inflated prices in the open market, impacting the poor.

3. Ecological Unsustainability:

- Rice is a water-intensive crop, particularly problematic in water-stressed regions like Punjab, Haryana.
- Using rice for ethanol adds stress on groundwater and irrigation infrastructure.

4. Ethical and Efficiency Issues:

- Critics argue ethanol from food grains is ethically problematic in a country with food insecurity.
- Second-generation (2G) ethanol from non-food biomass is a more sustainable and efficient alternative.

5. Agricultural Diversion and Monocropping:

- Focus on a few ethanol-linked crops (sugarcane, rice, maize) may:
- Encourage monoculture
- Affect crop rotation and soil fertility
- Reduce incentives for diversified farming systems

Way Forward and Policy Recommendations

1. Shift to 2G Ethanol:

- Promote ethanol production from:
- Crop residues
- Bagasse
- Urban waste and lignocellulosic biomass
- Less impact on food supply chains and water resources.

2. Regulatory and Monitoring Framework:

- Balance food security and energy goals through dynamic allocation mechanisms.
- Enforce transparent audits on diverted grains and their impacts on buffer stock and PDS.

3. Improve Ethanol Yield Efficiency:

- Support R&D and technology upgradation in ethanol extraction from non-edible and waste sources.

4. Climate-Resilient Feedstock Planning:

- Encourage region-specific feedstock policies based on local agro-climatic conditions.
- Avoid promoting rice for ethanol in drought-prone regions.

5. Strengthen Farmer Incentives:

- Ensure that procurement for ethanol does not come at the expense of food procurement obligations under MSP and PDS.
- Explore contract farming models and price guarantees for ethanol feedstock.

Conclusion:

- While ethanol blending helps meet energy and climate goals, the diversion of food grains like rice raises valid concerns about food security, resource efficiency, and agricultural sustainability.
- A balanced biofuel policy with a transition to 2G ethanol and robust governance is essential to avoid compromising India's nutrition and food safety net.

Source: https://www.downtoearth.org.in/agriculture/centre-approves-additional-28-million-tonnes-of-fci-rice-for-ethanol-production#:~:text=The%20Union%20government%20has%20approved,fuel%20instead%20of%20food%20security.