

GOVERNMENT OF INDIA
MINISTRY OF PETROLEUM AND NATURAL GAS
RAJYA SABHA
UNSTARRED QUESTION No. 136
ANSWERED ON 20/07/2026

CONCERNS OVER ETHANOL BLENDED PETROL

136. SHRI PRAMOD TIWARI:

Will the Minister of PETROLEUM AND NATURAL GAS be pleased to state:

- (a) whether push to blend ethanol with petrol is likely to worsen the country's already severe water crisis as crops with highly water-intensive form the backbone of ethanol programme;
- (b) if so, the details thereof;
- (c) whether ethanol production generates large volumes of wastewater which can contaminate surface and ground water if not properly treated;
- (d) if so, the remedial steps proposed to be taken in this regard; and
- (e) the steps proposed to be taken to address concerns raised on the impact of ethanol blended petrol on mileage and vehicle's life?

ANSWER

THE MINISTER OF STATE IN THE MINISTRY OF PETROLEUM AND NATURAL GAS
(SHRI SURESH GOPI)

(a) & (b): No.

The Government has adopted a balanced approach to the Ethanol Blended Petrol (EBP) Programme, ensuring that water sustainability, food security and farmers' interests remain paramount.

Under the National Policy on Biofuels, ethanol is produced from a diversified basket of feedstocks, including sugarcane-based feedstocks, maize, damaged foodgrains, broken rice, foodgrains unfit for human consumption, surplus foodgrains approved by the National Biofuel Coordination Committee (NBCC) and other approved agricultural feedstocks.

This diversified approach reduces dependence on any single crop while improving feedstock resilience. (contribution of maize towards ethanol blending has improved from 0% in ESY 21-22 to around 37% in ESY 25-26)

The Government is promoting crop diversification towards comparatively less water-intensive feedstocks such as maize. An Expert Committee constituted by the Ministry of Agriculture & Farmers Welfare in 2024 examined the water requirement of various ethanol feedstock crops, and its recommendations are being considered while implementing the programme.

Water-use efficiency is also being enhanced through micro-irrigation, drip irrigation and other water conservation measures under the *Per Drop More Crop* component of the Pradhan Mantri Krishi Sinchayee Yojana. Many sugar mills are also encouraging farmers to adopt water-efficient cultivation practices.

(c) & (d): Molasses-based distilleries with incineration boilers and grain-based distilleries are required to operate as Zero Liquid Discharge (ZLD) units, enabling recycling and reuse of process water while eliminating liquid effluent discharge. Modern ethanol plants typically consume about 3–5 litres of processed water for producing one litre of ethanol.

(e): The Government has addressed concerns relating to mileage and vehicle life through a phased, calibrated, scientifically validated and consultative transition to E20. Ethanol is not a new fuel; it has been used globally for over a century, and India's Ethanol Blended Petrol (EBP) Programme itself began in 2001.

Blending increased progressively from 1.53% in ESY 2013-14 to current level of 20% through a carefully sequenced roadmap developed by NITI Aayog in consultation with automobile manufacturers, Oil Marketing Companies, ARAI, SIAM, IIP and other technical institutions.

The transition was undertaken only after extensive laboratory testing and field validation covering engine durability, material compatibility, fuel systems, drivability, emissions and performance.

E15+ blended petrol has been in widespread use for over three-and-a-half years and E19-E20 fuel for over two-and-a-half years. More than 20 crore two-wheelers and over 3 crore petrol cars have been operating on these blends without any verified evidence of widespread engine failure or vehicle breakdown attributable to ethanol blending. Had E20 caused systemic engine or fuel-system damage, it would have been reflected in large-scale warranty claims, service records and consumer complaints, which has not been the case.

Before E20 was introduced, the Government ensured that vehicle manufacturers, ARAI, SIAM and other technical agencies completed comprehensive testing and homologation of E20-compatible vehicles. Homologation is a statutory certification process under which vehicles are subjected to rigorous testing for durability, fuel-system compatibility, corrosion resistance, emissions, performance and reliability. Only after meeting these prescribed standards were vehicles certified for operation on E20 fuel.

Manufacturer service data further corroborate these findings. One leading four-wheeler manufacturer serviced 2.84 crore vehicles during FY 2025–26, including 1.5 crore older, non-E20-certified vehicles, without reporting any vehicular damage attributable to E20 fuel. Similarly, one of the leading two-wheeler manufacturers reported that analysis of extensive service data found no higher incidence of damage in vehicles operating on E20 compared with earlier fuel blends.

Manufacturers continue to honour warranty obligations for vehicles using specification-compliant E20 fuel, reflecting their confidence in the scientific validation and testing undertaken.

With regard to mileage it depends on driving habits, tyre pressure, servicing and AC load far more than fuel type. Government, automobile manufacturers and vehicle testing agencies have clarified that fuel efficiency depends on several factors, including driving habits, vehicle maintenance, tyre pressure, wheel alignment and air-conditioning load. Any reduction in fuel economy in certain E10-designed vehicles is generally marginal (around 3–5%).

At the same time, E20 provides higher octane, better anti-knock performance, improved combustion characteristics, smoother acceleration and lower emissions, contributing to cleaner and more efficient engine operations. Emissions, fuel systems and material compatibility have confirmed that E20 fuel does not cause abnormal wear and tear or compatibility issues.
