Global Biofuel Production

Prelims: *Current events of national and international importance | Energy*

Why in News?

Recently, the OECD-FAO Agricultural Outlook 2026-2035 projects that food-based biofuels will continue to dominate global biofuel production through 2035.

Organisation for Economic Co-operation and Development (OECD) and Food and Agriculture Organization (FAO) Agricultural Outlook 2026–2035

- It is a joint report that gives a ***10-year forecast*** of global, regional, and national trends in agriculture, biofuels, and seafood markets.

First-generation biofuels	• They are produced from edible food crops using established fermentation and transesterification processes. • Ethanol (from maize, sugarcane, rice, and cereals) and biodiesel (from soybean, rapeseed, and palm oil).
Second-generation biofuels	• They are manufactured from non-edible biomass or lignocellulosic biomass. • For example, agricultural residues (straw and husks) and forestry waste, requiring more complex thermochemical and biochemical conversion methods.

> *Lignocellulosic biomass – The structural plant material, mainly made of cellulose, hemicellulose, and lignin (Earth's most abundant renewable resource).*

Key Findings of OECD-FAO Report

- First-generation biofuels will continue to dominate global biofuel markets

over the next decade.

- Second-generation biofuel will not see a substantial increase in production share.
- **Global ethanol projection –** By 2035, production expected to reach 162.5 billion litres
- **Feedstock share –** Maize (61%), sugarcane (22%), molasses (5%), and wheat (2%).
- **Global biodiesel projection –** Output to rise to 99 billion litres; vegetable oils (69%), used cooking oils and tallow (23%).
- **Consumption growth –** Biofuel demand is to grow at 1.4% annually through 2035, slower than the past decade.
- **Global demand –** Emerging economies (India, Brazil, and Indonesia) to account for 80% of demand growth.

Reference

OECD-FAO report

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