

Global Biofuel Alliance

Background:

- The **Prime Minister of India inaugurated the Global Biofuel Alliance** during the **G-20 Summit in New Delhi on September 9, 2023**.
- Key participants in the launch included leaders from Argentina, Singapore, Bangladesh, Brazil, Mauritius, Italy, USA, and UAE.

About the Initiative:

Global Biofuel Alliance (GBA):

- **Nature:** An alliance comprising governments, industries, and international organizations.
- **Objective:** Advocates for the global adoption of biofuels by promoting technological advancements and endorsing sustainable biofuel use.

Features of Global Biofuel Alliance:

1. Global Platform Provision:

- **Role:** Acts as a central knowledge repository and a hub of experts.
- **Purpose:** Catalyzes international cooperation for the advancement and widespread adoption of biofuels.

2. Promotion of Biofuel Production:

- **Objective:** Gathers major biofuel producers and consumers to advance the development and deployment of biofuels.

3. Standardization of Biofuels:

- **Initiative:** Seeks to establish robust standards and certification procedures with the involvement of diverse stakeholders.

Membership Details:

- **Participating Nations:** **19 countries** have expressed interest and agreed to **join the GBA**.
- **International Organizations:** **12 global organizations** have also shown **interest in becoming GBA members**.

Significance of Global Biofuel Alliance (GBA):

1. International Collaboration for Renewable Energy:

- **Support:** Endorsed by global organizations like the International Energy Agency, International Civil Aviation Organization, World LPG Association, World Economic Forum, etc.
- **Focus:** Emphasizes collaboration, providing additional opportunities for Indian industries to export technology and equipment.

2. Support for Indian Biofuel Initiatives:

- **Alignment:** Reinforces existing Indian biofuel programs such as **PM-JIVAN Yojana, GOBARdhan scheme, and SATAT**.
- **Impact:** Aims to boost the income of farmers, create more jobs, and facilitate holistic development in the Indian ecosystem.

3. Boosting Economic Activity:

- **Market Growth:** Anticipates significant growth in the global ethanol market, creating economic opportunities.
- **Net Zero Target:** Supports India's goal of achieving Net Zero by 2050 by tapping into the growth potential of biofuels.

Ethanol as a Potent Biofuel:

1. Clean Energy Production:

- **Efficiency:** Ethanol blending enhances the octane number of fuel, ensuring efficient burning and reduced CO2 emissions.
- **Benefits:** Reduces fossil fuel dependence, lowers import bills, and supports clean energy production.

2. Economic and Environmental Benefits:

- **Diversification:** Reduces economic dependence on fossil fuels and promotes reliance on renewable sources.
- **Environmental Impact:** Efficient burning results in cleaner emissions, contributing to India's carbon reduction goals.

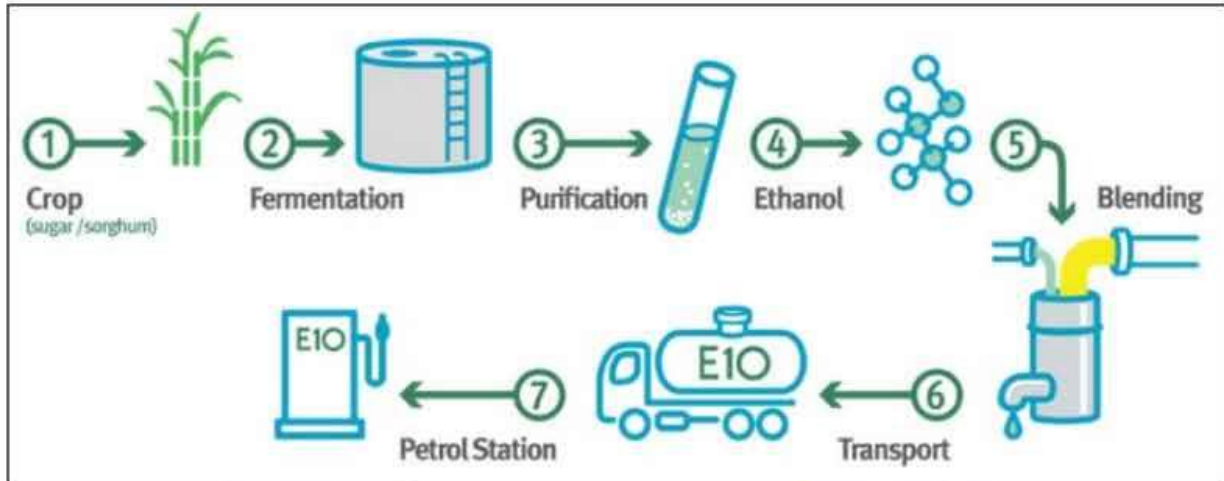


Fig- Ethanol blending

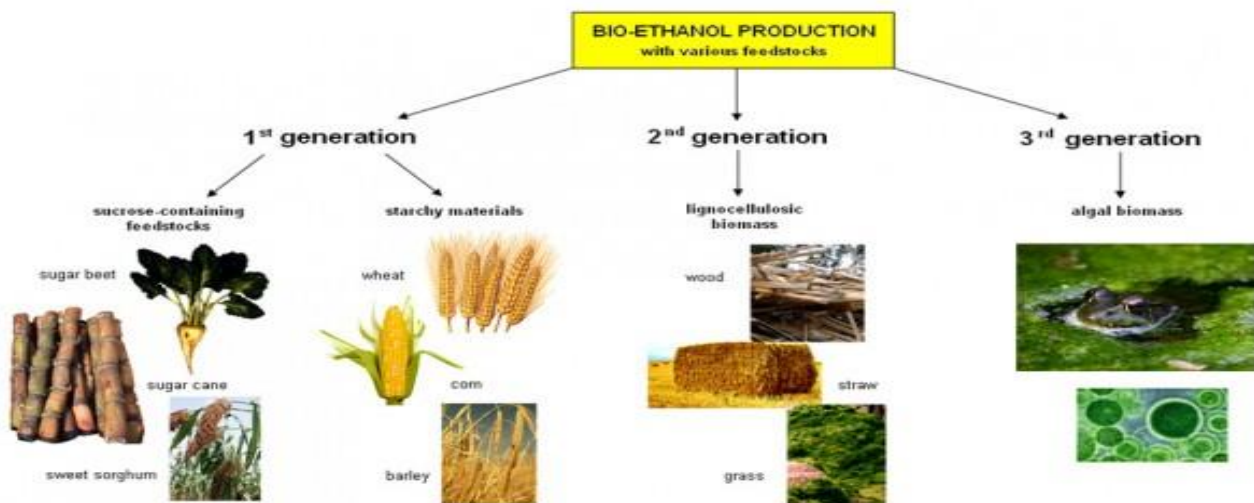


Fig- Generation of biofuels.

Government Initiatives and Policies:

1. Ethanol Blending Program and National Policy for Biofuels, 2018:

- **Objective:** Achieve 20% ethanol blending in gasoline by 2030.
- **Progress:** India has achieved 10% ethanol blending, with a revised target of 20% by 2025.

Challenges and Way Forward:

1. Challenges in Bioethanol Production:

- **Demand vs. Supply:** Current production is lower than demand for bioethanol blending.
- **Technological Compatibility:** Existing engines may not be optimized for blended fuels, affecting efficiency.

2. Land Use and Environmental Concerns:

- **Groundwater Depletion:** Increased sugarcane production may deplete groundwater, posing environmental challenges.
- **Food Security:** Land diversion for non-food crop production may impact food security.

3. Government Policy in Bihar:

- **Initiative:** Bihar Biofuels Production Promotion Policy, 2023.
- **Objectives:** Aligns with the **National Policy on Biofuels**, promoting investment in

ethanol and CBG manufacturing in Bihar.

Way Forward:

1. Technological Innovation:

- **Flex-Fuel Vehicles:** Develop technologies for vehicles compatible with biofuels, enhancing efficiency.
- **Diversification:** Explore alternative methods of ethanol production beyond sugarcane.

2. Research and Development:

- **Pre-Treatment Techniques:** Advance research in pre-treatment methods for biofuels to improve efficiency.
- **Carbon Sequestration:** Invest in R&D for carbon sequestration to mitigate CO₂ emissions from biofuels.

Conclusion: The launch of the Global Biofuel Alliance marks a significant step toward international collaboration in promoting biofuels. As India aligns its biofuel initiatives with global efforts, challenges in production, technology, and environmental impact must be addressed through innovation and sustainable practices. The alliance provides a platform for shared knowledge, standards, and partnerships, contributing to the global transition to renewable energy.