

#### **4. Ethanol Blended Petrol (EBP) Programme**

**Prelims: Economics**

**Mains: GS-III- Effects of liberalization on the Economy, Changes in Industrial Policy and their effects on Industrial Growth.**

#### **Why in News?**

- ▶▶ The Cabinet Committee on Economic Affairs has given its approval for fixing higher ethanol price derived from different raw materials under the EBP Programme for the forthcoming sugar season 2019-20 during ethanol supply year from 1st December 2019 to 30th November 2020.

#### **What is Ethanol?**

- ▶▶ Ethanol is basically alcohol of 99%-plus purity, which can be used for blending with petrol. The normal rectified spirit used for potable purposes has only 95% alcohol content.
- ▶▶ Both ethanol (also called anhydrous alcohol) and rectified spirit are produced mainly from molasses, a by-product of sugar manufacture.
- ▶▶ Mills typically crush cane with a total fermentable sugars (TFS) content of about 14%. Much of this TFS – sucrose plus so-called reducing sugars (glucose and fructose) – gets crystallised into sugar.
- ▶▶ The un-crystallised, non-recoverable part goes into what is called 'C' molasses. The latter, constituting roughly 4.5% of the cane, has a TFS of 40%. Every 100 kg of TFS, in turn, yields 60 litres of ethanol.
- ▶▶ Thus, from one tonne of cane, mills can produce 115 kg of sugar (at 11.5% recovery) and 45 kg of molasses (18 kg TFS) that gives 10.8 litres of ethanol.
- ▶▶ But rather than produce sugar, mills can also ferment the entire 14% TFS in the cane. In that event, they would end up making 84 litres of ethanol and zero kg of sugar. In between these two extreme cases, there are intermediate options as well, where the cane juice does not have to be crystallised right till the final 'C' molasses stage.
- ▶▶ The molasses can, instead, be diverted after the earlier 'A' and 'B' stages of sugar crystal formation. Mills, then, would produce some sugar, as opposed to fermenting the whole sugarcane juice into ethanol.

- ▶▶ If ethanol is manufactured using 'B' heavy molasses (7.25% of cane and with TFS of 50%), around 21.75 litres will get produced along with 95 kg of sugar from every 1 tonne of cane.

### **About Ethanol Blended Petrol Programme:**

- ▶▶ Ethanol Blended Petrol programme was launched in 2003 on a pilot basis and has been subsequently extended to all states & UTs except Andaman & Nicobar and Lakshadweep Islands.
- ▶▶ The programme sought to promote the use of alternative and environment friendly fuels and to reduce import dependency for energy requirements.
- ▶▶ The government has been notifying the administered price of ethanol since 2014.
- ▶▶ India has set a target of 10 percent ethanol blending in petrol by 2022.
- ▶▶ Government has notified administered price of ethanol since 2014. For the first time during 2018, differential price of ethanol based on raw material utilized for ethanol production was announced by the Government.
- ▶▶ These decisions have significantly improved the supply of ethanol thereby ethanol procurement by Public Sector OMCs has increased from 38 crore litre in ethanol supply year 2013-14 to estimated over 200 crore litre in 2018-19.
- ▶▶ With a view to limit sugar production in the Country and to increase domestic production of ethanol, Government has taken multiple steps including, allowing diversion of B heavy molasses and sugarcane juice for ethanol production.
- ▶▶ As the ex-mill price of sugar and conversion cost have undergone changes, there is a need to revise the ex-mill price of ethanol derived from different sugarcane based raw materials.
- ▶▶ There is also a demand from the industry to include sugar and sugar syrup for ethanol production to help in solving the problem of inventory and liquidity with the sugar mills.