



# Grain Based Ethanol Challenges and Solutions.

Presented to

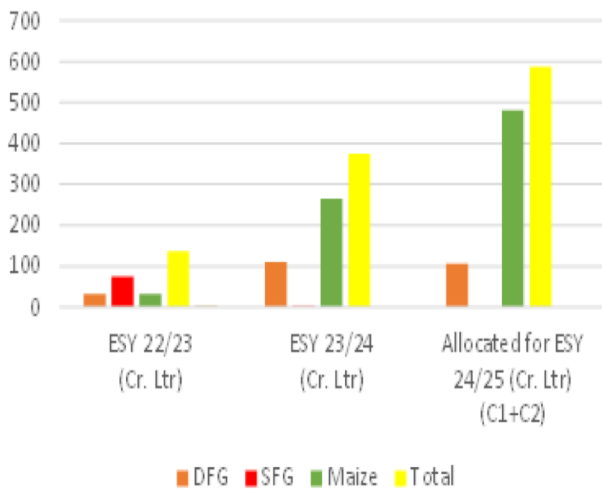
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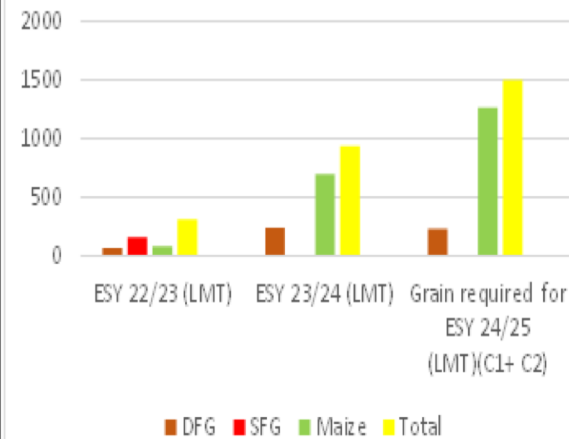
# KEY CONTRIBUTORS FOR BUILDING ETHANOL CAPACITY



Grain Ethanol Supplied to OMCs in Cr. Ltr (YOY)



Grain Procured (required) by Grain Ethanol Industry in LMT (YOY)



	ESY 22/23 (Cr. Ltr)	ESY 23/24 (Cr. Ltr)	Allocated for ESY 24/25 (Cr. Ltr) (C1+C2)
DFG	32	110	106.03
SFG	74	0.11	0
Maize	31	265	481.11
Total	137	375.11	587.14

	ESY 22/23 (LMT)	ESY 23/24 (LMT)	Grain required for ESY 24/25 (LMT)(C1+ C2)
DFG	70	242	233
SFG	163	0	0
Maize	82	697	1265
Total	315	939	1499

**Key Contributors** for developing 800 Crore liter grain ethanol manufacturing capacity within short period of 3-4 years, are:

- **Assured Grain Supply:** Grain at fixed prices provided certainty for ethanol producers.
- **Incentives and Support:** Support from DFPD in form of ISS and State governments; though some incentives remain undisbursed.
- **Relaxation of MoEF Conditions:** Expedited ECs and relaxed conditions for establishing ethanol plants have facilitated rapid expansion.
- **LTOA's signed by OMCs:** Assured ethanol purchase agreement provided certainty to ethanol producers.

# GRAIN (MAIZE + DFG) / ETHANOL FEEDSTOCK BALANCE



Year	Maize Production (LMT)	Maize for other industry (LMT)	Available Maize for Ethanol (LMT)	Available DFG for Ethanol (LMT)	Total Grain Available for Ethanol (LMT)	Projected Ethanol Blending %	Projected Ethanol Required (Cr. Liter)	Ethanol from Grain (Cr. Litre)	Projected Grain Required (LMT)	Shortfall of Grain (LMT)
2024	390	320.0	70.0	25	95.3	15%	750	400	96	0.7
2025	425	352.0	73.1	28	100.9	18%	936	600	144	43.1
2026	463	387.2	76.2	31	106.8	20%	1082	703.04	169	62.0
2027	505	425.9	79.1	34	112.8	22%	1237	804.3	193	80.2
2028	551	468.5	82.0	37	119.0	25%	1462	950.5	228	109.1
2029	600	515.4	84.7	41	125.4	27%	1642	1067.6	256	130.8

## Feedstock Balance Assumptions:

- **Maize Growth Rate:** 5-6% YOY growth, with potential for 8-9% YOY with focused development.
- **DFG:** Growth assumed at 10% YOY.
- **Ethanol Requirement:** corresponding to growth in Petrol consumption @4% CAGR

## Inference from Feedstock Balance:

- In 2024, shortage of merely 70,000 MT grain led to abnormal spike in grain prices.
- **In and post 2025, the existing grain supply may not meet ethanol blending @18% and beyond.**
- **This shortfall must be addressed by introducing other feedstocks (e.g., surplus FCI rice).**

- 1. Feedstock availability:** Grain corresponding to blending percentage is a challenge.
- 2. Feed-stock shortage:** led to abnormal spike in grain prices.
- 3. High Finance Cost for DEPs:** Establishing new infrastructure for DEPs is expensive, and with lagging feedstock availability, the cost-effectiveness of these plants is at risk.

- 1. Ensure Grain Availability:** By issuing surplus grain from FCI, which is holding stocks in abundance and facing the storage and procurement problem.
- 2. Link the Surplus FCI Grain price to Ethanol Procurement Price:** As per the formulae published in Tender for ESY 2021-22, ESY 2022-23, and ESY (C-1) 2023-24.
- 3. Link the Maize Ethanol Pricing to MSP:** Procurement price of ethanol should be linked to MSP, to ensure cultivation of maize remains profitable for farmers.
- 4. Equalize the price of all Grain-based ethanol** based on weighted average of allocated quantities by OMCs in ESY (C-1, C-2) 2024-25.

Thank You  
for your support

**GRAIN ETHANOL**  
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