India-US Corn Conundrum

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Why in News?

The **US** has expressed interest in **exporting corn** to **India**, but **India** remains **cautious** due to **GM crop concerns**, **strong domestic production**, and **political considerations**.

What Prevents India from Importing Corn from the United States?

- **Regulatory Ban on GM Imports:** India prohibits the import of **genetically modified (GM) corn**. With **94% of US corn in 2024 being GM** and India allowing GM cultivation only for **cotton**, importing US GM corn is **legally barred**.
- **High Tariff Barriers:** India's **tariff structure** discourages corn imports: a **0.5 million tonne quota** faces **15% duty**, while excess imports incur **50% duty**, making **US corn commercially unviable**.
- **Protection of Domestic Farmers:** Indian officials warn that cheap imports could threaten the **maize-for-ethanol ecosystem** and **new farmers**, prompting the government to **safeguard farmer incomes** amid rising domestic production and acreage.
- **Risk of Dumping:** The **US corn price** is just about **70%** of **Indian maize** without taking into account **shipping**, **marketing costs** and **business margins**. This would be equivalent to **dumping**, harming Indian maize farmers.
- **Sovereign Policy on Ethanol Blending:** Importing corn for **ethanol production** undermines India's goal of **import substitution**, which aims to use **domestic produce** and save **foreign exchange** rather than create dependency on imports.
    - **20% ethanol blending** in petrol could save up to **USD 10 billion in annual forex outgo** through **import substitution.**

What are Key Facts Regarding Corn(Maize)?

- **About: Corn (maize)** is a highly versatile crop, known as the **queen of cereals** for its high **genetic yield potential**.
    - Originating in **Central America**, it is a globally vital cereal for **human consumption**, **animal feed**, and **forage**.
- **Climate & Temperature:** Sensitive to frost (especially seedlings) requires a **frost-free period** with mean daily temperatures above **15°C** but tolerates **heat up to 45°C** with sufficient water.
    - It is highly responsive to **solar radiation**. Adequate **light penetration** to upper leaves is essential for **grain filling.**
- **Soil Requirements:** Prefers **well-aerated, well-drained soils**. Performs poorly on **heavy clay** or **sandy soils**, and is vulnerable to **waterlogging**.
- **Water Requirements:** It is a **water efficient crop**, needing **500–800 mm** of water to achieve **maximum grain yield**.
- **India's Global Standing:** India is the **5th largest maize producer (FAO, 2023)** but only the **14th largest exporter (UN-COMTRADE 2022)**. With yields under **4 four tonnes per hectare** (vs. global **6 t/ha**), it remains largely **self-sufficient**.

- India has recently started **importing maize** mainly from **Myanmar** and **Ukraine.**
- **Major Producers: The top producing countries are the United States, China, and Brazil.**
  - The major maize-growing states in India are Karnataka, Madhya Pradesh, and Bihar.
- **Uses:** Maize is highly valued globally for its multifarious uses as food, feed, fodder, and raw material for industries.
  - Apart from food and feed, 14–15% of India's maize is used for industrial purposes.
  - It is a critical ingredient in starch, oil, protein, alcoholic beverages, food sweeteners, pharmaceuticals, cosmetics, textiles, films, gum, packaging, and paper industries.
  - **Indian Agricultural Research Institute (IARI)** has developed India's first **"waxy" maize hybrid**, high in **amylopectin starch**, making it ideal for **ethanol production.**

What are the Key WTO Provisions Enabling Import Restrictions by Countries?

Measure	Description	Key Condition
Sanitary and Phytosanitary (SPS) Measures	Countries can **set their own health and safety standards** for food, animals, and plants.	Must be **science-based, not arbitrarily discriminatory**, or a disguised trade restriction.
Agreement on Technical Barriers to Trade (TBT)	Covers technical regulations, standards, and conformity assessments (e.g., quality standards, labeling, product specifications).	Must not be **more trade-restrictive than necessary** to meet objectives like **national security, consumer protection, or environmental safety.**
Safeguard Measures	Allow temporary import restrictions **if domestic industry is threatened by a surge in imports** (unforeseen development).	Restrictions are temporary, usually require compensation, and do not require unfair trade.
Anti-Dumping	Extra duties on imports sold below normal value, causing domestic industry injury.	Dumping is proven through **pricing analysis.** A direct causal link exists between dumped imports and economic harm.
Countervailing Duties	Duties on subsidized imports causing domestic industry injury.	These duties are applied only after a thorough investigation confirms that a foreign export subsidy is causing **"material injury" to the domestic industry** of the importing country

Related Keywords for Mains

- **Atmanirbhar Agriculture**
  - **"Technology as a Plough":** AI, drones, and precision farming powering harvests.
  - "**From Lab to Land, Innovation Grows":** Translating R&D into farmer-friendly solutions.
  - **"Biotech Bharat, Bio-Secure Bharat":** Genetic advances balancing productivity and safety.
- **Crop Resilience & Diversification**
  - **"Climate-Smart Crops, Climate-Secure Nation":** Adaptation through drought- and flood-tolerant varieties.
  - **"Credit as Cultivation Catalyst":** Timely finance enabling small farmers to thrive
- **Sustainability & Resource Efficiency**
  - **"Water Saved is Wealth Gained":** Efficient irrigation and conservation practices.
  - **"Energy in Every Acre":** Solar pumps, renewable inputs, and precision energy management.
  - **"Fertilizers from the Farm, Not the Factory":** Promoting bio-inputs and organic

solutions.

Conclusion

India's restrictions on U.S. corn imports stem from **GM crop bans, tariff barriers, protection of farmers, and ethanol self-reliance goals**. While India is the world's **5th largest maize producer**, low yields and rising demand drive occasional imports. Balancing **domestic protection and global trade pressures** remains a key policy challenge.

Drishti Mains Question:

Q. Discuss the factors restricting corn imports from the United States despite India's growing maize demand.

UPSC Civil Services Examination, Previous Year Questions (PYQ)

Prelims

Q. Given below are the names of four energy crops. Which one of them can be cultivated for ethanol? (2010)

(a) Jatropha

(b) Maize

(c) Pongamia

(d) Sunflower

Ans: (b)

Q. According to India's National Policy on Biofuels, which of the following can be used as raw materials for the production of biofuels? (2020)

1. Cassava
2. Damaged wheat grains
3. Groundnut seeds
4. Horse gram
5. Rotten potatoes
6. Sugar beet

Select the correct answer using the code given below:

(a) 1, 2, 5 and 6 only

(b) 1, 3, 4 and 6 only

(c) 2, 3, 4 and 5 only

(d) 1, 2, 3, 4, 5 and 6

Ans: (a)

Mains

Q.How far is Integrated Farming System (IFS) helpful in sustaining agricultural production? (2019)