



CUMIN (JEERA) PRICES HIKED

Why in the News?

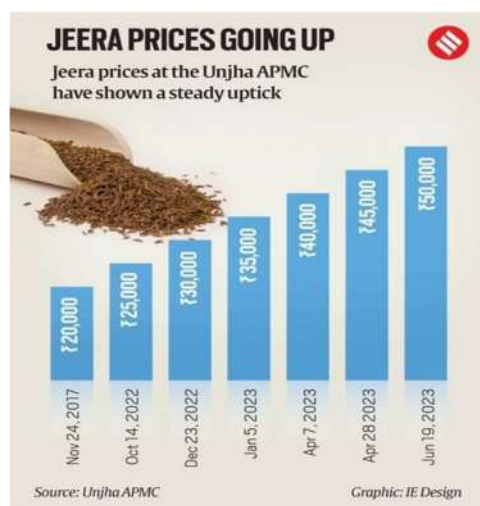
- Recently, cumin prices touched a new high of Rs 54,125 per quintal at the APMC mandi of Unjha in Gujarat.
- Unseasonal rains during the second half of March have been attributed as the main reason for shooting up the cumin prices.

About APMC

- Agriculture Produce Market Committee is the regulator of agricultural commodity markets. It has been constituted as per the APMC Acts for the management of agricultural markets.
- APMC is a system operating under the State Government since agricultural marketing is a State subject.
- These are special markets to ensure that farmers receive a fair price for their produce.
- These markets try to bring all the produced food to the market, so that their sale can be done fairly
- Through various laws, the government ensures that the farmer's crop cannot be sold below the rate fixed by the APMC.
- Market places for APMCs are set up in different places of a particular state, so these markets divide the state geographically as well.
- In the APMC markets, only licensed traders are allowed to purchase agricultural produce directly from farmers. Retail owners, wholesalers, or mall owners are prohibited from buying produce directly from farmers within these markets.



Agricultural Produce Market Committee (APMC)



About Cumin

- Cumin (botanical name: *Cuminum cyminum*) is a flowering plant of the Apiaceae family.
- It is an indigenous species from the eastern Mediterranean Sea to India.

- ✧ The one-seeded seeds in each fruit are dried and used as a whole or powdered form in many food dishes.
- ✧ It is an aromatic seed, which adds extra flavor to Indian dishes.
- ✧ Cumin is an excellent anti-oxidant and at the same time it is effective in healing inflammation and relaxing muscles.
- ✧ Cumin is fiber rich and it is a good source of minerals like iron, copper, calcium, potassium, manganese, zinc and magnesium.
- ✧ Vitamins like Vitamin E, A, C and B-complex are also found in abundance in it.
- ✧ Cumin is not an essential food, but rather a premium seed spice that adds aroma to a wide range of dishes, including curries, rice, and even soft drinks. It is commonly used in powdered form, either as a standalone spice or as an ingredient in powdered garam masala blends that are sprinkled over various food preparations.



Import-Export of cumin

- ✧ India's jeera production caters to both domestic and export markets.
- ✧ During the period of 2022-23 (April-March), cumin seed exports amounted to 1.87 lakh tonnes, valued at Rs 4,193.60 crore.
- ✧ In the previous fiscal year, cumin seed exports were 2.17 lakh tonnes, worth Rs 3,343.67 crore.
- ✧ The top export destinations for Indian cumin seeds include China, Bangladesh, the US, UAE, Pakistan, Saudi Arabia, and Turkey.
- ✧ China has been importing a significant amount of cumin from India due to insufficient domestic supply.
- ✧ China's imports from India range from 25,000 to 30,000 tonnes of cumin.
- ✧ The demand for cumin has risen this year as hotels and restaurants reopen after Covid-19 restrictions.
- ✧ There is also demand from Bangladesh and Pakistan, driven by the Bakrid festival.

Which are the major producers of jeera?

- ✧ India produces around 70% of the total cumin spice in the world.
- ✧ Other countries like Syria, Turkey, United Arab Emirates and Iran make up the remaining 30% of the producing countries.
- ✧ The producing countries, unlike India, are facing disruption of production due to civil wars and natural calamities.
- ✧ Cumin is cultivated in an area of approximately 8 lakh hectares in India. Out of the total production of 7.25 lakh tonnes in the year 2021-22, the combined contribution of two states, Gujarat (4.20 lakh tonnes) and Rajasthan (3.03 lakh tonnes), accounted for 99.7% of the total production.

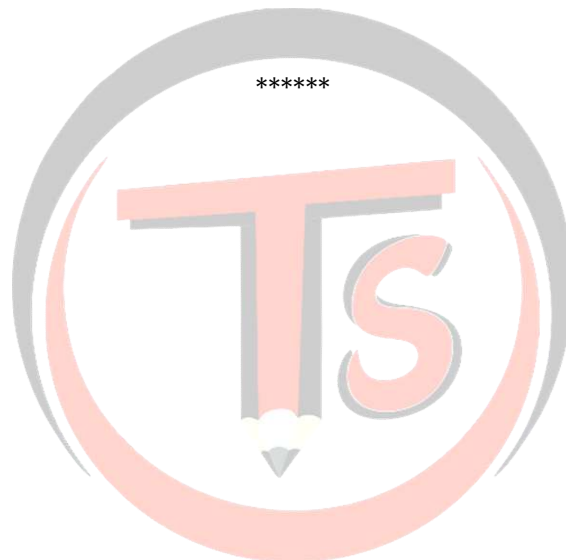
Why do others not cultivate cumin?

- ✧ Cumin is a weather-sensitive crop.

- ✧ It requires a moderately cool and dry climate without humidity.
- ✧ Excessive humidity can lead to fungal infestation during flowering and seed development stages.
- ✧ Cumin is naturally found in northern parts of Saurashtra, Kutch, and Gujarat, as well as adjoining districts of western Rajasthan.
- ✧ Specific areas for cultivation include Jalore, Barmer, Jodhpur, Jaisalmer, Pali, and Nagaur.
- ✧ Unjha is located in the center of the cumin cultivation belt in India.
- ✧ Unjha serves as a market where cumin prices are determined.

Benefits to farmers

- ✧ Approximately 80% of this year's cumin harvest has already been sold in the market.
- ✧ The remaining 20% of the crop is expected to fetch prices of Rs 50,000 or more per quintal.
- ✧ The majority of farmers who have recently sold their crops are from Rajasthan. These farmers have the capability to store their produce in order to maximize their profits.



STATE DINNER

Why in the News?

- ☑ The Prime Minister of India has arrived in New York for a three-day visit to the United States. This visit is significant because it marks the first time Prime Minister Modi has been invited to a state dinner at the White House in his honor.

What is a state dinner?

- ☑ The state dinner is held at the White House, the residence of the US President, and carries symbolic value as a visiting dignitary sharing a meal at the host's home.
- ☑ A state dinner is a formal event specifically organized to honor a visiting dignitary, distinguished from other lunches and dinners with the US President.
- ☑ Along with the state dinner, other significant events during a state visit include a 21-gun salute White House arrival ceremony and an invitation to stay at the Blair House (the US President's guesthouse across Pennsylvania Avenue), the US President's guesthouse.
- ☑ On November 7, 1961, US President John F. Kennedy and First Lady Jacqueline Kennedy hosted a state dinner at the White House in honor of Prime Minister Jawaharlal Nehru and his daughter Indira Gandhi.
- ☑ According to the White House Historical Association (WHHA), a state dinner honoring a visiting head of government or reigning monarch is one of the grandest and most glamorous affairs at the White House.
- ☑ It is a key element of an official state visit, serving as an opportunity for the President and First Lady to honor the visiting head of state and their spouse.
- ☑ The state dinner is a gesture of courtesy, goodwill, and hospitality, symbolizing the tradition of sharing a meal to solidify friendship.

What are state visits?

- ✧ State visits are the most prestigious foreign visits to the United States, where the head of a state visits upon a formal invitation from the US President.
- ✧ Under President Joe Biden, the only two state visits prior to the Indian Prime Minister were by France's President Emmanuel Macron and South Korea's President Yoon Suk Yeol.
- ✧ The invitation for a state visit indicates that the United States regards the guest nation as a significant friend and ally.



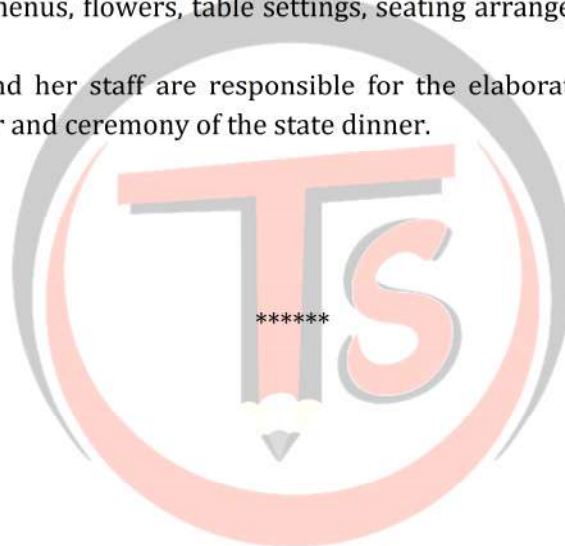
Background of state visits

- ✧ The history of the state visit dates back to the early 1800s, when the US President would host members of his Cabinet, Congress, and other senior officials.
- ✧ Over time, state dinners became associated with the White House hosting foreign dignitaries.
- ✧ According to the WHHA website, the first foreign head of government to attend a state dinner at the White House was King Kalakaua of Hawaii. President Ulysses Grant and First Lady Julia Grant hosted the dinner on December 22, 1874.



How is a state dinner planned?

- ✧ According to the WHHA website, these formal dinners include the creation of invitations and guest lists, menus, flowers, table settings, seating arrangements and entertainment for the evening.
- ✧ The first lady and her staff are responsible for the elaborate planning and attention behind the glitter and ceremony of the state dinner.



LIVESTOCK AND LIVESTOCK PRODUCTS

Why in the News?

- ✓ The Centre has withdrawn the proposed draft of the Live-stock and Live-stock Product (Importation and Exportation) Bill, 2023.

What is the new bill?

- ✓ The Bill is meant to replace the Live-stock Importation Act 1898 and the Live-stock (Amendment) Act 2001. It frames guidelines for the import and export of live animals, which has raised concerns among animal lovers.
- ✓ The Department of Animal Husbandry and Dairying (DAHD), which comes under the Ministry of Fisheries, Animal Husbandry and Dairying, prepared the draft of the Live-stock and Live-stock Products (Importation and Exportation) Bill-2023.
- ✓ The department gave 10 days' time for the public to send their comments. The 4-page Bill has 10 sections.

It is different from the existing law because of three key aspects

- ✓ It has provisions to regulate livestock exports.
- ✓ The draft bill has expanded the definition of livestock to include felines and canines.
- ✓ The proposed bill takes away the powers of state governments to regulate.

What is new in the proposed draft?

- ✓ The Livestock Importation Act, 1898, which is currently in force, has only 5 sections which include -
- ✓ Section 1 (Short title and local extent)
- ✓ Section 2 (Definitions)
- ✓ Section 3 (Power to regulate import of livestock)
- ✓ Section 3A (Power to regulate Importation of live-stock products)
- ✓ Section 4 (Power of State Government to make rules)
- ✓ Section 5 (Protection to persons acting under Act)
- ✓ While the earlier law only regulated the import of livestock, the proposed draft bill includes provisions to regulate livestock exports as well.
- ✓ Section 4 of the proposed Bill empowers the government to make arrangements for the promotion and development of exports of livestock and livestock products.
- ✓ In this draft, "an act has been prepared to regulate the import of livestock and livestock products as well as to formulate measures for the promotion and development of exports of livestock and livestock products."
- ✓ The definition of livestock has been expanded to include felines and canines in the proposed draft Livestock and Livestock Products (Import and Export) Bill, 2023. As per the existing law (the Livestock Importation Act, 1898), "livestock" includes horses, cows, camels, sheep and any other animal which may be specified by the Central Government in an official notification."

- ☑ However, the proposed draft Bill defines the live-stock as all equines (all live equine irrespective of purpose including donkey, horses, mule, assess, hinnies), bovines (all bovine animals including cattle, buffaloes, bullocks or any animals falling in the category of bovidae), caprines, ovines, swines, canines, felines, avian, laboratory animals, aquatic animals and any other animal which may be specified by the Central Government by notification in the Official Gazette from time to time, except those prohibited in any other act.”
- ☑ The draft Bill defines livestock and livestock products as commodities. As per Section 2(A) of the proposed draft, “commodity” means livestock, products of livestock origin, livestock genetic material, biological products and pathological material of livestock origin.

Why the need for a new law?

- ☑ The present law, Live-stock Importation Act, 1898 that regulates import of live-stock is 125 years old.
- ☑ “The Live-stock Importation Act, 1898, being the pre-constitutional/pre-independence Central Act, a need has been felt to align it with the contemporary requirements and prevailing circumstances related to sanitary and phyto-sanitary measures, and its extant Allocation of Business Rules, 1961,”.
- ☑ In 2001, the then government, had amended the 1898 law. First issued an ordinance - the Livestock Import (Amendment) Ordinance, 2001. But later, the Ordinance was replaced by the Livestock Import (Amendment) Bill, 2001.
- ☑ One of the key changes introduced by the Vajpayee government in the law was inclusion of the import of livestock products.
- ☑ The earlier law dealt with only the import of live-stock.
- ☑ As per the Ordinance, "livestock products" included all types of meat and meat products including fresh, chilled and frozen meat tissue; poultry, pig, sheep, goat parts; egg and egg powder; milk and milk products; bovine, ovum (sheep family) and caprine (goat family) embryos, ova and semen; Pet food products of animal origin and any other animal product which may be specified by the Central Government by notification in the Official Gazette.
- ☑ The 2001 amendment also empowered the Centre to “regulate, restrict or prohibit” the trade of any live-stock product that may be liable to affect human or animal health.

Criticism of the Draft Bill

- ☑ According to a UN notification in 2021, out of the 80 billion land animals raised for food worldwide, nearly 2 billion are exported alive to different countries.
- ☑ The proposed Livestock and Livestock Products [Importation and Exportation] Bill allows for the live export of animals from India.
- ☑ Critics argue that the draft Bill provides a blanket free pass for the mistreatment of millions of animals raised for food and other purposes.
- ☑ Various stakeholders have sharply criticized the proposed draft Bill.
- ☑ Animal rights organizations have expressed concerns that the Bill will unleash a range of cruelties on animals, referring to it as a "Pandora's Box."

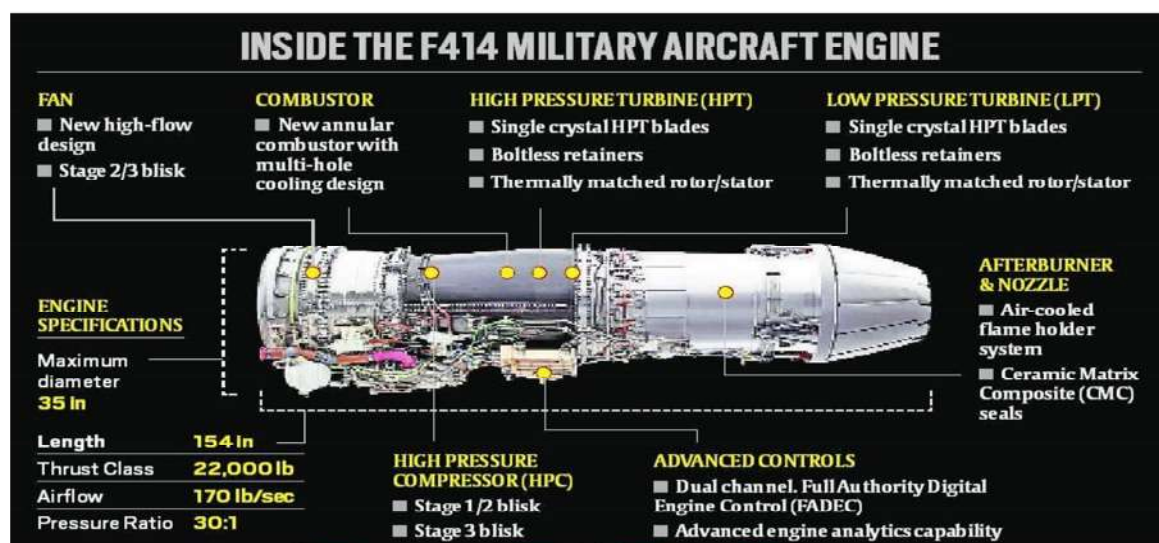
INDIA-US JET ENGINE DEAL

Why in the News?

- ✧ The Indian Prime Minister is likely to announce a landmark agreement to facilitate the transfer of at least 11 critical jet engine technologies during his ongoing official visit to the United States.

Why is GE's jet engine a big deal?

- ✧ GE's F414 military aircraft engine is responsible for powering advanced fighters such as the Boeing Super Hornet and Saab Gripen.



- ✧ During the ongoing visit of the Indian Prime Minister to the United States, a landmark agreement is expected to be announced. This agreement will fulfill India's long-standing goal of acquiring advanced fighter jet engine technology and will signify a significant achievement in Indo-US defense cooperation.
- ✧ Sources indicate that India and the US are on the verge of finalizing the deal that will enable General Electric (GE) Aerospace, an American manufacturing company, to share critical technology with Hindustan Aeronautics Limited (HAL). The technology transfer will facilitate the joint production of GE-F414 jet engines, which will power the indigenous Light Combat Aircraft (LCA) Tejas Mk-II.
- ✧ In recent times, the Critical and Emerging Technologies (iCET) US-India Initiative has been implemented.
- ✧ The agreement to manufacture GE-F414 engines in India for the LCA Tejas Mk2 is a significant milestone in India-US relations and signifies the end of the 'technology denial regime'.

Significance

- ✦ This deal will authorize the indigenous production of GE's F414 engines in India under a license for the Light Combat Aircraft (LCA) Tejas MK2.
- ✦ Only a few countries, such as the United States, Russia, Britain, and France, have achieved expertise in the required technology and metallurgy for manufacturing engines that power combat aircraft.
- ✦ Despite India's efforts towards self-reliance in the development of several crucial technologies, including cryogenic rocket engines, it is not currently included in the list of countries possessing such capabilities.
- ✦ The countries that possess advanced engine technologies for combat aircraft have traditionally been unwilling to share them. This is the primary reason why the deal for manufacturing GE's F414 engines in India is unprecedented.
- ✦ It was described by former Prime Minister Manmohan Singh, as a "technology denial regime" imposed on India by the West under US leadership in 2008.

What is the GE-414 military aircraft engine?

- ✦ According to the GE Aerospace website, turbofan engines, which are a part of GE's suite of military aircraft engines, have been utilized by the US Navy for over 30 years.
- ✦ More than 1,600 F414 engines have been delivered, adding up to more than 5 million engine flight hours on a variety of missions.
- ✦ According to GE, the engine is classified in the 22,000-pound or 98 kilonewton thrust class and incorporates advanced technologies such as Full Authority Digital Engine Control (FADEC) - the latest aircraft ignition and engine control system that digitally manages the engine's performance.

Which warjets around the world are powered by these engines?

- ✦ According to GE, the F414-powered aircraft are currently in operation or on order with eight countries.
- ✦ The F414-GE-400 engines power the US Navy's Boeing F/A-18E/F Super Hornet and EA18G Growler electronic attack aircraft. Saab's Gripen E/F fighter aircraft use the F414G, a single-engine version of the F414-GE-400.

History of GE's Aerospace Branch and India

- ✦ An India-specific variant of the engine, the F414-INS6, was selected by the Aeronautical Development Agency (ADA) of the Defense Research Development Organization (DRDO) for the LCA Tejas Mk2.
- ✦ LCA Tejas is powered by a single GE-404-IN20 engine.
- ✦ The GE-404 engine, the basic design of which is replicated in the F414, was developed in the 1970s.

HAL Tejas Mk-2

- ✧ The F414 engines may also power prototypes and the initial batch of the Advanced Medium Combat Aircraft (AMCA), a future fifth-generation fighter aircraft for India's Air Force.
- ✧ The GE website mentions AMCA as a possible recipient of the engine.
- ✧ Safran and HAL have jointly developed power engines for the indigenous Advanced Light Helicopter (ALH) Dhruv and Light Combat Helicopter (LCH) Prachanda.

What kind of efforts has India made to make its own fighter jet engine?

- ✧ DRDO's Gas Turbine Research Establishment (GTRE) first worked on developing the GTX-37 engine for the LCA.
 - ✧ Subsequently, the ambitious Kaveri Engine project was approved in late 1989.
 - ✧ A total of nine full prototypes and four core engines have been developed, with engine testing conducted for 3,217 hours. Altitude and Flying Test Bed (FTB) tests have been successfully completed. However, the engines were not deemed suitable for combat aircraft as they exhibited a significant shortfall in weight thrust, producing only 70.4 kN compared to the targeted 81 kN.
 - ✧ In 2011, the Comptroller and Auditor General (CAG) criticized the GTRE for its inability to produce engines for the LCA despite a significant increase in costs.
 - ✧ While the LCA Tejas was originally integrated with the GE-404 engine, the government informed the Parliament in 2021 that the technical capabilities developed through the Kaveri engine project would be utilized as derivatives in drones.
 - ✧ The agreement between GE and HAL, which would require approval from the US Congress, will finally conclude India's long-standing quest for advanced fighter jet engine technology
- ❖ In 2022, the United States and India inaugurated the Joint Summit Meeting, emphasizing the importance of iCET.
 - ❖ **Objective** - This initiative is to foster collaboration and learning between scientists, researchers, experts from Indian scientific institutions, and defense industries
 - ❖ The leadership for this initiative will be provided by the National Security Council Secretariat in India and the National Security Council in the United States.
 - ❖ The primary focus areas identified under iCET, which facilitate the establishment of relations between the government, educational sector, and industries in fields such as primary architecture, quantum computing, 5G/6G, biotech, space, and semiconductors, are as follows:
 - ✧ Strengthening the innovation ecosystem
 - ✧ Defense innovation and technological cooperation
 - ✧ Resilient and semi-conductor supply chains
 - ✧ Space Technology
 - ✧ STEM (Science, Technology, Engineering, and Mathematics) talent Future generation framework
