

African swine fever

- With more than 100 pigs dead in Ranchi district since July 27 due to suspected swine fever, the Jharkhand animal husbandry department (AHD) has sounded the alert and asked the others to take precautionary measures.
- African Swine Fever (ASF) is a highly contagious viral disease of pigs.
- In its acute form the disease generally results in high mortality. ASF is a different disease to swine flu.
- The virus does not affect people and there is no impact on human health.
- African swine fever virus (ASFV) is a large, double-stranded DNA virus in the Asfarviridae family.
- It is the causative agent of African swine fever (ASF).
- The virus causes a hemorrhagic fever with high mortality rates in domestic pigs; some isolates can cause the death of animals as quickly as a week after infection.

How is the disease transmitted?

- African swine fever can be spread through:
 - direct contact with infected pigs, faeces or body fluids
 - Indirect contact via fomites such as equipment, vehicles or people who

work with pigs between pig farms with ineffective biosecurity

- Pigs eating infected pig meat or meat products
- Biological vectors ticks of the species *Ornithodoros*.

THE HINDU

Fair and Remunerative Price (FRP)

- The Cabinet Committee on Economic Affairs, at its meeting chaired by Prime Minister here on Wednesday, has approved Fair and Remunerative Price (FRP) of sugarcane for sugar season 2022-23 (October - September) at ₹305 per quintal.
- What is the Fair and Remunerative Price (FRP)?
- FRP is the price declared by the government, which mills are legally bound to pay to farmers for the cane procured from them.
- The payment of FRP across the country is governed by The Sugarcane Control order, 1966.
- It mandates payment within 14 days of the date of delivery of the cane.
- The concept of Statutory Minimum Price (SMP) of sugarcane was replaced with the 'Fair and Remunerative Price (FRP)' of

sugarcane for 2009-10 and subsequent sugar seasons with the amendment of the Sugarcane (Control) Order, 1966 in 2009.

- The cane price announced by the Central Government is decided on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACPC) in consultation with the State Governments and after taking feedback from associations of the sugar industry.

THE HINDU

DRAGON FRUIT CULTIVATION

- A key feature of these crops is that they can grow in extremes of temperature.
- Dragons grow well in poor soils but are best suited to tropical climates with 40–60 cm rainfall for growth. The temperature between 20°C to 30°C is considered best for growing dragon fruit crops.
- If your climate outside is too cold or too hot for dragon fruit, you can also successfully grow a potted dragon fruit plant.
- Although dragon fruit is in the cactus family, it is not like the cacti you typically see in the desert. Dragon fruit is a subtropical cactus native to Central America and South America,

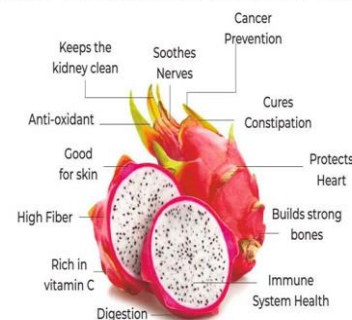
which means it thrives in mild, humid environments.



Origin of Dragon Fruit

- Dragon fruit grows on the Hylocereus cactus, also known as the Honolulu Queen, whose flowers open only at night. The plant is native to Central America and southern Mexico.
- However, today farmers grow it all over the world. As a result, it is known by many names, including papaya, pitahaya and strawberry pear.

HEALTH BENEFITS OF DRAGON FRUIT



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MILLET

- Millets are traditional grasses or crops that are friendly to arid

environments and considered to do well in drought-like conditions, according to Food and Agriculture Organization.

- Millet farming directly results in preserving and conserving biodiversity.
- This is one reason why women farmers, with their ecological acumen and their close association with climate protection, are best suited to be ambassadors of millet cultivation.
- They also universally succeed in practicing seed sovereignty principles and water conservation.
- With the creation of incentives toward promoting the woman farmer, these goals of millet cultivation and sustainable development, especially those related to agriculture and sustainable production and consumption, can be achieved.
- Around 4,000 litres of water is required to produce one kilogram of rice, it has been argued.
- For the last few years, millets such as jowar, bajra, ragi have dominated urban consumption baskets through either direct-cooked consumption, or more popularly, via the fast-moving consumer goods penetration.

- There is an imported penetration of seeds, whole grains and cereals not native to the Indian geography or cuisine.
- Quinoa is a prominent example that has seen increasing domination in urban diets.
- Therefore, under the 'Vocal for Local' campaign, indigenous crops must be lent more support and focus.
- A sustainable way to pursue this is to empower women farmers and self-help groups (SHG), by equipping them with advanced packaging techniques, agro-marketing, financial literacy and other entrepreneurial skills.
- Grassroots workers like the anganwadi and ASHA workers must be further involved as nutrition ambassadors and entrepreneurs in the millet revolution.

THE HINDU

CONCERN of reintroduction of cheetah

- In 2020, the Supreme Court provided a glimmer of hope when it gave a go-ahead to central government's ambitious plan for bringing in the cheetah from Namibia, Africa.
- The sites that have been suggested for the relocation are the Kuno-

Palpur Wildlife Sanctuary in Madhya Pradesh, the Velavadar National Park in Gujarat and the Tal Chapar sanctuary in Rajasthan.

- Genetic differences in cheetah subspecies
- One of the major issues that has concerned experts is the genetic differences in the cheetah subspecies.
- The cheetahs coming to India will not be from the Asiatic subspecies, but instead from the African subspecies.
- The African cheetahs not only look different, but are also used to a different habitat and prey base. In comparison, the Asiatic cheetah is smaller, thinner and slightly paler in colour than its African counterpart.
- Introducing a different subspecies to new ecological setting carries its own set of biodiversity issues and disease risks.
- Not enough space to accommodate cheetahs
- A cheetah requires a substantial amount of space.
- Many activists have said that the proposed habitats in India are not large enough to accommodate cheetahs, and do not have enough prey to sustain the big cats.
- According to a report by Smithsonian Magazine, the proposed Indian wildlife habitats do not have an area

of more than 1,000 square kilometers, and also have much less prey base than the African homes of cheetahs.

- Might take focus away from species that need attention
- With renewed focus on bringing the cheetah back to India, experts fear that it might take away the focus away from other species that need more attention.
- One such example is the great Indian bustard, which stands on the brink of extinction in the country today.
- Risk of diseases in new setting
- A Down to Earth report explains that when animals are being introduced to a new landscape, there is a risk of disease spread to both the individual animals and to the wildlife species which inhabit the site chosen for reintroduction.
- The stress of unfamiliar or unnatural conditions of confinement, especially during the translocation process might trigger diseases in cheetahs.

THE HINDU

REUSABLE SPACECRAFT

- A reusable spacecraft is a class of spacecraft that have been designed with repeated launch, orbit, deorbit and atmospheric re-entry in mind.

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- This contrasts with conventional spacecraft which are designed to be expended (thrown away, allowed to burn during re-entry) after use.
- Examples of reusable spacecraft are spaceplanes (such as the Space Shuttle orbiters and the Dream Chaser) and space capsules like the SpaceX Dragon.
- Such spacecraft need mechanisms to prevent the disintegration of the spacecraft and its occupants/cargo during re-entry. Failure of such systems may be catastrophic.
- Reusable spacecraft include mechanisms to deorbit and reenter the atmosphere in a controlled fashion
- For this purpose, the Space Shuttle included OMS pods, and the SpaceX Dragon included its own engines, used for deorbiting. Deorbiting slows the spacecraft down, lowering its perigee to inside the atmosphere where the vehicle descends to Earth.
- As a rough rule of thumb, 15% of the landed weight of an atmospheric re-entry vehicle needs to be heat shielding.
- Thermal Protection Systems (TPS) can be made of a variety of materials, including reinforced carbon-carbon and ablative materials.