Prelim Bits 26-06-2022 & 27-06-2022 | UPSC Daily Current Affairs

Ancovax

As COVID-19 cases rise across India, the Union Ministry of Agriculture has launched the Ancovax.

- Ancovax is India's first animal vaccine against SARS-CoV-2 virus.
- It is vaccine for animals like dogs, lions, leopards, mice and rabbits.
- It is an **inactivated vaccine** (killed vaccine) developed using the **antigen** (infectious part) of the Delta variant.
- In addition, it uses **Alhydrogel** as an adjuvant to boost the immune response.
- This vaccine is capable of **neutralizing both Delta and Omicron variants**.
- It was developed by the Indian Council of Agricultural Research-National Research Centre on Equines (**ICAR-NRCE**).
- The aim of the vaccine is **to protect endangered animals** such as lions and tigers.
- The vaccine can protect pets, and animals in the zoo.
- It can also prevent transmission of disease from companion animals to the humans.

Kits Launched	Purpose
CAN-CoV-2 ELISA Kit	Detects COVID in canines
Surra ELISA Kit	Detects Trypanosoma evansi infection in animals
Equine DNA Parentage Testing Kit	Determining parentage in horses and other equines

Carnivac-Cov

- Prior to Ancovax, **Russia** had registered the **world's first COVID-19 vaccine for animals** called Carnivac-Cov in 2021.
- It generated antibodies against the COVID-19 virus in dogs, cats, foxes and mink.
- The vaccine contains an inactivated SARS-CoV-2 virus strain to elicit humoral and T cell-mediated immune responses in the animals.
- The vaccine has been developed **to prevent animal-to-human viral transmission**.

Reference

1. https://www.thehindu.com/sci-tech/science/explained-ancovax-indias-first-covid-19-vaccine-for-animals/article6551681ece
2. https://indianexpress.com/article/explained/everyday-explainers/explained-anocovax-covid-vaccine-for-animals-india-7963421/
3. https://www.outlookindia.com/national/explained-india-first-animal-covid-vaccine-ancovax-its-need-and-covid-risk-in-animals-news-201777

Iskander-M Missile

Russia has promised its ally Belarus the delivery of Iskander-M tactical missile systems.

- The Iskander-M tactical missile systems are the **nuclear-capable missiles**, which can use ballistic or cruise missiles.
- Codenamed as "**SS-26 Stone**", it is road-mobile; **surface-to-surface** short-range ballistic missile (**SRBM**).
- The missile is a transporter-erector launch system. It can also fire ground-launched cruise missiles (GLCMs).
- The Iskander-M system has been exclusively used by the Russian military, whereas Iskander-E is the one meant for export.

Reference

1. https://indianexpress.com/article/explained/explained-what-is-iskander-m-missile-system-russia-belarus-7992721/
2. https://missiledefenseadvocacy.org/missile-threat-and-proliferation/todays-missile-threat/russia/iskander-m-ss-26/

Maasai Tribes

There was tension in Tanzania, when police personnel arrived to reportedly evict Maasai tribes in the area in order to make way for Loliondo Game Reserve for the United Arab Emirates (UAE) royal family.

- The Maasai tribes are an indigenous ethnic group in East Africa.
- They are **semi-nomadic pastoralists** settled in **Kenya and northern Tanzania**.
- The Maasai are among the foremost African ethnic groups, due to their distinct traditions, customs and dress and their residence near the many national game parks of East Africa.
- **Language** - Maa, a language derived from Nilo-Saharan. They also speak the official languages of Tanzania and Kenya - Swahili, English.
- **Diet** - Traditional diet of the Maasai people is derived mostly from their cattle.
- Though they don't often eat beef; they eat milk and blood which is harvested by puncturing the loose flesh on the cow's neck with an arrow.

Reference

1. https://www.downtoearth.org.in/news/africa/fortress-conservation-tension-in-tanzania-s-loliondo-as-troops-move-in-to-evict-maasai-to-make-way-for-game-reserve-83248
2. https://www.siyabona.com/maasai-tribe-east-africa.html
3. https://www.britannica.com/topic/Maasai

Pseudomogrus sudhii

A new species of spider discovered from the Thar Desert of Rajasthan has been named as Pseudomogrus sudhii, after an Indian arachnologist.

- Pseudomogrus sudhii is a new species of **jumping spider** of the salticidae family.
- This species inhabits **dry grass blades of the desert**.
- This species of jumping spider was found in the Desert National Park.

- It is the first report of this genus from India. So far, 35 species of spiders of this genus have been discovered worldwide.
- **Threat** - In Desert National Park, its **habitat has been destructed** as villagers are cultivating the land.

Spiders are important creatures as they are pest-controllers.

Reference

1. https://www.thehindu.com/sci-tech/energy-and-environment/new-spider-from-thar-desert-named-after-malayali-arachnologist/article65556583.ece
2. https://timesofindia.indiatimes.com/city/jaipur/new-species-of-jumping-spider-spotted-at-desert-national-park/articleshow/91244046.cms
3. https://www.hindustantimes.com/cities/mumbai-news/researchers-detect-two-new-species-of-spiders-in-rajasthan-s-thar-desert-101648390556854.html

Aerosol Study on Transmission of Covid-19

The Aerosol study of the transmission of SARS-CoV-2 gives insight into the transmission characteristics of the novel coronavirus in air in hospital settings and in residential areas and public places.

- **Sampling** - A machine, which sucks in air, fitted with a filter on which a gel was spread was taken and worked in the target areas.
- The samples collected from the filter were either
    1. Used to carry out an RT-PCR test to determine the presence of the virus, or
    2. Cultured by infecting vero cells in the lab (to find out if the collected virus samples were infectious).
- **Findings** - Virus was found in samples collected from COVID-19 wards.
- Outside, in the corridors and near the hospitals the virus was not detected, implying a dilution or removal of the virus.
- Having separate COVID-19 wards and negative pressure rooms are good, because infection does not spread very far.

Negative pressure rooms are isolation wards in hospitals to keep persons with infectious diseases.

- The virus was detected even 20-25 feet away from infected persons.
- This means it is in the air for quite some time. That is why **this study confirms that this virus is spreading through air**.
- The virus was detected when they sampled the air in the toilet even 2 hours after an infected person had used it. So, when using public toilets, masks should not be removed, even if no one is present.
- In a closed space, physical distancing alone is not helpful, because the virus borne on droplets can travel upto 20-25 feet.
- So, people should have their masks on, in closed space, even if they are 6-10 feet away from infected person.
- Air cleaning and circulation in closed rooms is important. Sterilization filters may be employed

for air conditioning.

Reference

1. https://www.thehindu.com/sci-tech/health/aerosol-study-shows-how-sars-cov-2-spreads/article65563648.ece
2. https://www.thehindu.com/news/national/karnataka/researchers-study-spread-of-covid-19-during-short-conversations/article65536627.ece

