

OSIRIS-REx MISSION / ASTEROID BENNU



- On May 11, NASA's Origins, Spectral Interpretation, Resource Identification, Security, Regolith Explorer (OSIRIS-REx) spacecraft will depart asteroid Bennu, and start its two-year long journey back to Earth.
- Bennu is an asteroid located about 200 million miles away from the Earth.
- Bennu is named after an Egyptian deity. The asteroid was discovered by a team from the NASA-funded Lincoln Near-Earth Asteroid Research team in 1999.
- Bennu is a B-type asteroid, implying that it contains significant amounts of carbon and various other minerals.
- Bennu is considered to be an ancient asteroid that has not gone through a lot of composition-altering change through billions of years, which means that below its surface lie chemicals and rocks from the birth of the solar system.
- Therefore, scientists and researchers are interested in studying this asteroid as it might give them clues about the origins of the solar system, the sun, the Earth and the other planets.

SHEIKH ZAYED BOOK AWARD



- Prominent German philosopher Juergen Habermas had turned down the Sheikh Zayed Book Award over its ties “with the existing political system” in the UAE, a hereditarily ruled country long criticised for its suppression of dissent.
- The Sheikh Zayed Book Award is a literary award begun in the UAE.
- The award is named after Sheikh Zayed bin Sultan Al Nahyan, the first president of the UAE when the federation of seven sheikhdoms became a country in 1971.
- While describing itself as an “independent” initiative, the prize is administered by Abu Dhabi culture and tourism authorities.
- The "Cultural Person of the Year" is the premier category, it includes an award of one million Dirhams (around \$300,000) while the other categories receive around \$200,000 each.

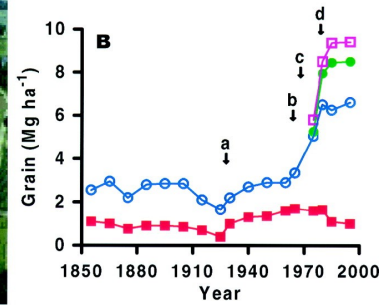
- Habermas was named the Cultural Personality of the Year, a distinction that carries a cash prize of 1 million dirhams.
- Habermas' influential writings on human rights, morality and democracy, among other topics, have stirred debate in Germany and beyond.

Baba Banda Singh Bahadur



- Baba Banda Singh Bahadur was born on 16th Oct. 1670 at Rajouri in the Poonch district of Western Kashmir as Lachhman Dev.
- His father Ram Dev was an ordinary farmer Rajput.
- Baba Banda Singh Bahadur aimed at national awakening and liberation of the country from the oppressive rule of the Mughals.
- He killed Wazir Khan, Governor of Sarhind in the battle of Chappar Chiri on May 12, 1710 A.D. avenging the cruel act of the Mughals and served his Sacche Patshah Guru Govind Singh.
- Banda Singh Bahadur developed the village of Mukhlisgarh and made it his capital. He then renamed it to Lohgarh (fortress of steel) where he issued his own mint.
- He briefly established a state in Punjab for half a year.
- Banda Singh sent Sikhs to the Uttar Pradesh and Sikhs took over Saharanpur, Jalalabad, Muzaffarnagar and other nearby areas.
- Banda Singh Bahadur is known to have halted the Zamindari and Taluqdari system in the time he was active and gave the farmers proprietorship of their own land.
- It seems that all classes of government officers were addicted to extortion and corruption and the whole system of regulatory and order was subverted.
- Unfortunately, Banda Singh Bahadur and his army were captured from the Gurdas Nangal fort and Banda was put in an iron cage.
- The remaining Sikhs were captured and chained and were brought to Delhi in a procession with the 780 Sikh prisoners, 2,000 Sikh heads hung on spears, and 700 cartloads of heads of slaughtered Sikhs used to terrorise the population.
- Banda was asked to embrace Islam or either gets killed. A true Sikh that he was, he chose death.
- He was killed in a very brutal manner, where his eyes were gouged out and his limbs and skin were separated.

Broadbalk experiment



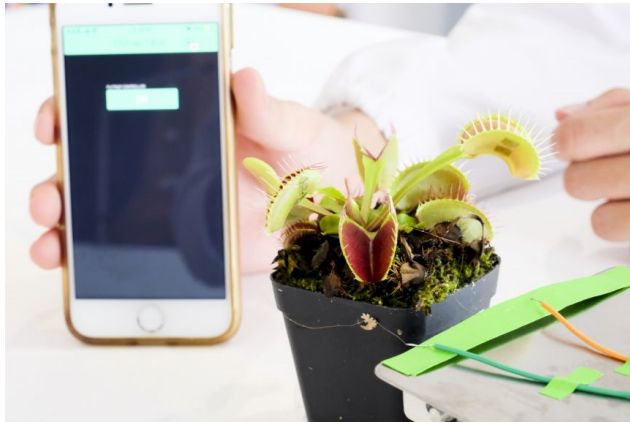
- It is the world's longest running farm study.
- The field in Hertfordshire county of southern England has been under continuous scientific experiments for the past 178 years.
- Scientists have been sowing wheat on the field, named Broadbalk, every year since 1843 to understand how to use fertilisers to improve crop yield.
- The research was started by agricultural scientist John Bennet Lawes and chemist Joseph Henry Gilbert under the Rothamsted Research institution.
- The aim of the experiment is to test the effects of different organic and inorganic fertilisers on soil fertility and study the optimum nutrition requirements to improve crop yield.
- The land was divided into 19 strips of wheat field, each 300 metres long and 6 m wide.
- To test the benefits of different combinations, some strips received inorganic fertilisers, some organic and some others a combination of both.
- One strip was left received neither of these.
- After 175 years of study, the scientists have found that yields from the section where wheat was grown with a two-year break, were higher than from sections where wheat was grown continuously.
- The use of organic manure had increased the soil organic matter content on some plots.
- The highest average yield was in wheat treated with N6 fertiliser, grown in both continuous and rotational manner.
- There is little benefit for farmers using fertilizers with such high levels of nitrogen.

What is 'Iron Dome', Israel's missile defence system that intercepts rockets?



- Israel's 'Iron Dome' missile defence system is intercepting barrages of hundreds of rockets fired by Gaza's Hamas rulers and other militant groups.
- The Rafale and Israeli-designed system relies on a radar system to analyse the incoming rocket and intercepts and destroys short-range rockets and artillery shells.
- It is highly mobile and is also effective against aircraft, helicopters and UAVs.

Researchers develop device to control Venus flytrap via smartphone



- Researchers at Singapore's NTU have developed a device that allows them to control a Venus flytrap using electric signals from a smartphone.
- By attaching tiny electrodes to the plant, researchers said they were able to make its trap close as it does when catching a fly.
- In this way, the plant could be used as a "soft robot", they added.

The Himalayan red fox's subspecies



- The Himalayan red fox's subspecies, *Vulpes Vulpes griffithi*, was spotted in Uttarakhand's Munsiyari, officials said.
- "We've seen at least eight subspecies of the red fox at such an elevation in the Himalayan region," the head of Monal NGO said.
- The Pithoragarh Divisional Forest Officer said the spotting of the subspecies was due to prolonged conservation efforts.

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