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## Why in Newspapers?

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Recently, 'Agritech Report 2022' titled "What's Next for Indian Agri-Technology" has been released by a global consulting firm named FSG.

### Quick Issue?

- Agricultural technology, or agricultural technology (Agri-Tech), is the application of technology in agriculture based on agronomy, agronomy, and agricultural engineering.
- It aims to improve the yield, efficiency, profitability and sustainability of agricultural operations.

### Historical Background?

- Agri-tech startups with significant private equity inflows are driving India's agri-tech innovations and investment story.
- **Focus Areas:** Market Linkages, Agri-Fintech, Farm Management Software, Remote Sensing and Advisory, and Farm Automation.
- Technology has irreversibly disrupted the traditional agricultural value chain – how farmers access information and inputs and how they grow and sell their produce.
- According to agriculture experts: Agritech startups may move from 'government-controlled agriculture markets' to more 'demand-driven digital markets'.
- At present, it is estimated that there are around 600 to 700 agri-tech start-ups operating at different levels of the agri-value chain in India.
- Many of these agri-tech startups use Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT), etc. to unlock the potential of big data for greater resource use efficiency, transparency and inclusivity. We do. Examples: Ninja kart, Countryside and Crawlfarm (Otipy)
- Ninjacart reduced wastage to 4 percent as compared to up to 25 percent in traditional chains through a demand-driven cropping schedule.
- DeHaat has enabled up to 50 per cent increase in farmers' income resulting in savings in input cost, increased agricultural productivity and better price discovery.

### Other Key Facts?

#### Proficiency in Agricultural Inputs

- **Water:** Drip irrigation technology, use of sensors for moisture control, sprinklers for irrigation.
- **Fertilizers and Pesticides:** Fertilizer Sensors, Drones for Spraying Pesticides
- **Efficient input data:** Kisan Suvidha Portal, m-Kisan
- **Electricity:** Solar powered water pumps.
- **Labour:** The mechanization of crop improved labour productivity.
- **Harvest Management:-** Pusa Biodecomposer- To deal with stubble/crop residue. Agricultural waste is used as input for bio-ethanol production.



## Indigenous Navigation System Navigator

### Why in Newspapers?

Recently, the Indian government has been pushing smartphone makers to enable support for its NavIC navigation system in new devices sold in the country from next year.

### Quick Issue?

- Currently, the use of NavIC is limited. It is being used in public vehicle tracking, to provide emergency warning alerts to deep-sea fishermen.
- It is being used in places where there is no terrestrial network connectivity. Also to track and provide information related to natural calamities. Making this support available in the smartphone is the next step.

### Historical Background?

- NavIC (Navigation with Indian Constellation) is an independent standalone navigation satellite system developed by the Indian Space Research Organization (ISRO).
- In the year 2006, Project Navik was started at a cost of \$ 40 million. It was expected to be completed by the end of 2011, but became operational in 2018.
- NAVIC consists of eight satellites. It covers the entire landmass of India. Its range is up to 1,500 km.
- The main difference between navigator and other navigation systems is the service area they cover.
- GPS meets the need of users across the globe. GPS satellites orbit the Earth twice a day. At the same time, the navigator is currently for use in India and adjoining areas.
- Like GPS, there are three more navigation systems that have global coverage. These include Galileo of the European Union, GLONASS of Russia and Baido of China.
- India's 2021 satellite navigation draft policy states that the government will work towards 'expanding coverage from regional to global' to ensure availability of NavIC signals.
- In this way the sailor will give his services in any part of the world.
- The government said in August, the navigator is as good as the GPS of the United States in terms of positioning accuracy.

### Other Key Facts?

#### Why is India promoting seafarers?

- Navigation systems including GPS are operated by the defence agencies of the respective nations. As such, it is possible that civil services may be downgraded or rejected.
- In contrast, NAVIC is an indigenous positioning system under Indian control. There is no risk of withdrawal or denial of service by any country.
- India also wants to encourage its ministries to use NavIC applications to promote local industry engaged in developing indigenous NavIC-based solutions.

