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1. What is CDP-SURAKSHA, govt's new digital platform to disburse subsidies to horticulture farmers?

Why in News?

The BJP-led government has come up with a new platform to disburse subsidies to horticulture farmers under the Cluster Development Programme (CDP) — the Centre's initiative to promote horticulture crops. The platform is known as CDP-SURAKSHA.

The move seeks to push the growth of India's horticulture sector, which contributes nearly one-third to the agriculture gross value addition (GVA), making a substantial contribution to the Indian economy. The total production of horticulture crops has also spiked in recent years. While in 2010-11, it stood at 240.53 million tonnes, the number rose to 334.60 million tonnes in 2020-21.

What is the CDP-SURAKSHA?

The CDP-SURAKSHA is essentially a digital platform. SURAKSHA stands for "System for Unified Resource Allocation, Knowledge, and Secure Horticulture Assistance." The platform will allow an instant disbursal of subsidies to farmers in their bank account by utilising the e-RUPI voucher from the National Payments Corporation of India (NPCI).

The CDP-SURAKSHA has features such as database integration with PM-KISAN, cloud-based server space from NIC, UIDAI validation, eRUPI integration, local government directory (LGD), content management system, geotagging, and geo-fencing.



How does the CDP-SURAKSHA work?

The platform allows access to farmers, vendors, implementing agencies (IA), and cluster development agencies (CDAs), and officials of the National Horticulture Board (NHB).

A farmer can login using their mobile number and place an order for planting material such as seeds, seedlings, and plants based on their requirement.

Once the demand has been raised by the farmer, the system will ask them to contribute their share of the cost of planting material. The subsidy amount paid by the government will appear on the screen automatically.

After the farmer pays their contribution, an e-RUPI voucher will be generated. This voucher will then be received by a vendor, who will provide the required planting material to the farmer.

Once the ordered planting material is delivered to the farmer, they have to verify the delivery through geo-tagged photos and videos of their field. It is only after the verification that the IA will release the money to the vendor for the e-RUPI voucher. The vendor will be required to upload an invoice of the payment on the portal.

The IA will collect all the documents and share them with the CDA for subsidy release, then only the subsidy will be released to the IA.

However, the farmer, who raised the demand for the plant material using the platform, can avail of the subsidy at the first stage only.

What is e-RUPI?

The CDP-SURAKSHA platform uses e-RUPI vouchers from the NPCI. The voucher is a one-time payment mechanism that can be redeemed without a card, digital payments app or internet banking access, at the merchants accepting e-RUPI. According to the NPCI, the e-RUPI can be shared with the beneficiaries for a specific purpose or activity by organisations or government via SMS or QR code.

How is the new system different from the old one?

In the old system, a farmer had to buy planting materials on their own. They would then have to approach the officials concerned for the release of the subsidy.

The CDP-SURAKSHA platform, however, will provide subsidies to farmers upfront, at the time of purchasing the planting material. Vendors, who will supply planting materials to farmers, will receive their payment only after farmers verify the delivery of their orders.

What is the Cluster Development Program (CDP)?

The CDP is a component of the central sector scheme of NHB. It is aimed at leveraging “the geographical specialisation of horticulture clusters and promoting integrated and market-led development of pre-production, production, post-harvest, logistics, branding, and marketing activities.”

So far, 55 horticulture clusters have been identified, out of which 12 have been selected for the pilot. These clusters are in different stages of development. Four more clusters — a

floriculture cluster in West Bengal, coconut clusters in Kerala and Tamil Nadu, and white onion clusters in Gujarat — are also in the pipeline. Each cluster will have an implementing agency and a cluster development agency (CDA).

Relevance: GS Prelims & Mains Paper III; Economics

Source: Indian Express

2. Physicist Peter Higgs passes away: What is the 'God particle', which he had theorised in 1960s?

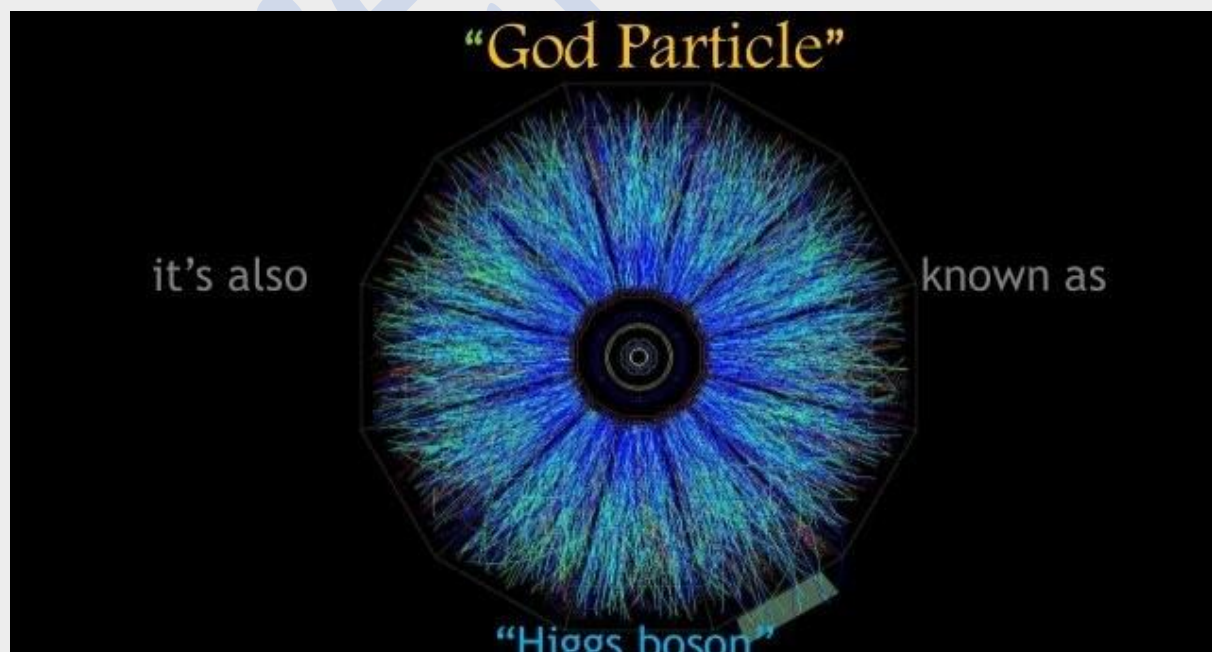
Why in News?

It required nearly 50 years, and the world's biggest and most complex machine, to detect the Higgs boson in 2012. An elementary particle like electrons, quark, photons or neutrinos, the Higgs boson, is known to impart mass to every other particle. Its existence was predicted in the 1960s, but it was found only in 2012 through elaborate experiments carried out at the Large Hadron Collider, located on the border of France and Switzerland.

The man, after whom the particle is named, Peter Higgs, died recently at the age of 94.

Why is the Higgs boson called the 'God particle'?

Much of the hype surrounding the Higgs boson amongst the common people comes from the fact that it got dubbed as the 'God particle'. The expression was first used by Nobel Prize winning physicist Leon Lederman, who wrote a book by that title in the 1990s about the continuing search for the Higgs boson. Lederman wanted to call his book 'The Goddamn Particle' to describe the elusive nature of the Higgs boson, but was persuaded by the publishers to go in for the God particle, a name that stuck. Many scientists detest that expression, mainly because the particle acquired religious connotations in some circles because of that name.



Why does the Higgs boson matter?

The big significance of the Higgs boson is that it is the particle that is supposed to account for the mass of every other fundamental particle. It was discovered in the 1950s and 1960s, through the works of several physicists, that the mass is not intrinsic to matter. Strange though it might seem, particles like electrons or protons do not have mass within themselves. Higgs, and these other scientists, came up with the idea of an all-pervasive field, named the Higgs field, just like there is an electric field, or a magnetic field or a gravitational field.

It is the interaction of the particles with this field that lends them the mass. Greater the interaction, larger is the mass. Different particles interact with this Higgs field in different ways, and that is what gives them different masses. A photon, which is a light particle, does not interact with this field at all, and is thus massless. There are other particles that are massless as well. But particles like electrons and protons, do interact, and have masses. The Higgs boson itself interacts with this field, and thus has mass.

The concept of Higgs field and Higgs particle is not very intuitive, but these are fundamental to our current understanding of the way nature works. The main fame for the Higgs boson came from its elusive nature. Scientists kept frantically searching for it for more than four decades but could not find it. One of the main science objectives of the LHC, which is the world's biggest particle accelerator and cost about US\$ 9 billion to build, was to find the Higgs boson. It did, within the first four years of its operations, and that remains one of its crowning glories till now.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

3. New FDTL rules: Why DGCA has asked airlines to indicate their implementation timelines

Why in News?

Aviation safety regulator Directorate General of Civil Aviation (DGCA) has written to Indian airlines, asking when they would be in position to implement the new Flight Duty Time Limitation (FDTL) rules, which include measures for stress management and fatigue among pilots.

It follows a hearing in the Delhi High Court earlier this month, where the DGCA was asked to indicate the tentative date for the new regulations' implementation.

Initially supposed to be enforced from June 1, the rules were deferred due to stiff resistance from airlines. The DGCA has been asked to indicate the likely implementation date in the next hearing.

What's behind the deferment of new FDTL rules?

DGCA on March 26 deferred the planned June 1 implementation of new FDTL rules. The aviation safety regulator announced the postponement without mentioning a new implementation timeline. It allowed carriers to continue following the existing rules until their own schemes are approved, in line with the new FDTL rules.

Airlines had been voicing concerns that implementing the new rules — aimed at better fatigue management through changes like longer weekly rest periods and fewer night landings as compared to the current norms — would result in a requirement of around 20-25 per cent more pilots. They argued that hiring, training, and releasing pilots for duty takes several months.

The FIA had said that carriers would have to cut capacity by 15-20 per cent if the new rules, notified in January, were implemented from June 1. In February, the Federation of Indian Airlines (FIA), which comprises IndiGo, Air India, and SpiceJet, had written to the DGCA seeking postponement of the new rules by a year.

Why are pilots dissatisfied?

While the deferment was a win for the airlines, it left a large number of pilots and their associations dissatisfied. What seemed to have added to their discontent was the flexibility given to airlines, with the regulator not even mentioning a fresh deadline to comply with the new rules.

Flight crew fatigue and exhaustion are seen as major factors contributing to human errors in aircraft operations and can lead to catastrophic accidents. Also, fatigue and exhaustion can be dangerous for the health of the crew.

The DGCA had, in fact, cited a few incidents of pilot deaths ostensibly due to exhaustion while pushing airlines to adhere to the new regulations from June 1.

Across airlines, pilots have been expressing concerns over growing fatigue and stress as a result of being stretched to their limits in terms of flying hours, haphazard and ill-planned rostering, and unusually high crew utilisation levels.

This is because carriers are competing to rapidly expand their networks. Some of these issues were among the reasons behind numerous Vistara pilots calling in sick last week, leading to network-wide cancellations and delays.

What do the new FDTL rules say?

As per the new rules, among other changes, mandatory weekly rest period for pilots shall increase to 48 hours from the current 36. Their night flying would also come down through a combination of extension of definition of "night" by an hour and curtailing the number of night landings allowed to be made by the same crew.

Complying with these rules would require airlines to either hire and train more pilots or scale back operations. Airline officials lament that a hard deadline that gives only a few months to the carriers would impact their operations and business.

Those in favour of expeditious implementation argue that airlines had enough time until June 1, as the new rules were notified early January. Further, they say the carriers were sounded out much before that by the DGCA through the consultative process.

Relevance: GS Prelims & Mains Paper II; Governance
Source: Indian Express

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