27 Apr 2022: PIB Summary for UPSC

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1. Nutrient Based Subsidy Scheme

Syllabus: GS III, Economy, Issues related to direct and indirect farm subsidies

Prelims: About Nutrient Based Subsidy Scheme

Mains: Effectiveness of the Nutrient Based Subsidy Scheme to enhance the availability and affordability of fertilizers for farmers.

Context: The proposal put forth by the Department of Fertilizers for Nutrient Based Subsidy rates for phosphatic and potassic fertilizers for Kharif season has been approved by the Union Cabinet.

How will this benefit the farmers?

- The subsidy assured by the Cabinet for Kharif season will also include indigenous fertilizers through freight subsidy along with additional support for indigenous manufacturing of fertilizers and import of di-ammonium phosphate (DAP).
- With the subsidy on DAP fertilizers by the Union government on a per bag basis, there has been a 50% increase in per bag subsidy. Besides, the government has also decided to further increase the subsidy rate on DAP due to an increase in its international prices.
- This will assist the farmers to access phosphatic and potassic fertilizers at an affordable and reasonable price supporting the agriculture sector.

Read about the Fertilizer Policy in India in the linked article.

Implementation of the subsidy:

- The subsidy will be provided for phosphatic and potassic fertilizers on the basis of NBS rates for Kharif season (In India, this season starts in June and ends in October and the crops are sown at the onset of the south west monsoon and are harvested at the end of monsoon) to ensure smooth availability of these fertilizers to the farmers at an affordable price.

To get a comprehensive understanding of Nutrient Based Subsidy Scheme, follow the link.

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2. Digital India RISC-V (DIR- V)

Syllabus: GS III, Science and Technology, Awareness in the field of IT, Computers

Prelims: RISC – V, Digital India

Mains: Discussing India's Digital transformation.

Context: The Government of India launched the Digital RISC-V (DIR-V) program setting a new era of processor innovation through open standard collaboration.

Aim of the programme:

- The digital India RISC-V microprocessor (DIR – V) intends to enable the production of microprocessors in India in the upcoming days achieving industry-grade silicon and design wins by December 2023.
- The DIR-V programme will attract more partnerships between startups, academia and multinational companies upholding the objective to make India not only an RISC-V talent hub for the world but also a supplier of RISC-V systems on chips of servers, mobile devices, automotive and microcontrollers across the globe.
- The intention behind this programme also includes the aspiration of having a roadmap for semiconductor design and innovation to boost the semiconductor ecosystem.

RISC-V: An Overview

- It is designed with an Open Standard Instruction Set Architecture (ISA) which is based on Reduced Instruction Set Computer (RISC) principles.
- The RISC -V formulates a next-generation computing architecture that provides open-source licenses that do not require fees for usage.
- The project of RISCs began at the University of California, Berkeley in 2010 and has been popularised by many nations.
- The Ministry of Electronics and Information Technology (Government of India) is also planning to join the RISC-V International as a Premier Board Member to collaborate, contribute and advocate Indian expertise with other global RISC-V leaders.
- With the launch of the RISC microprocessor system in India, the government has exemplified its active steps towards the vision of an Atmanirbhar Bharat.

Read about Digital India in the shared link.

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3. New Premium Quality Wheat

Syllabus: GS III, Science and Technology, Awareness in the field of biotechnology

Prelims: PBW1 Chapati

Mains: Significance of biotechnology in improving the varieties of crops in India.

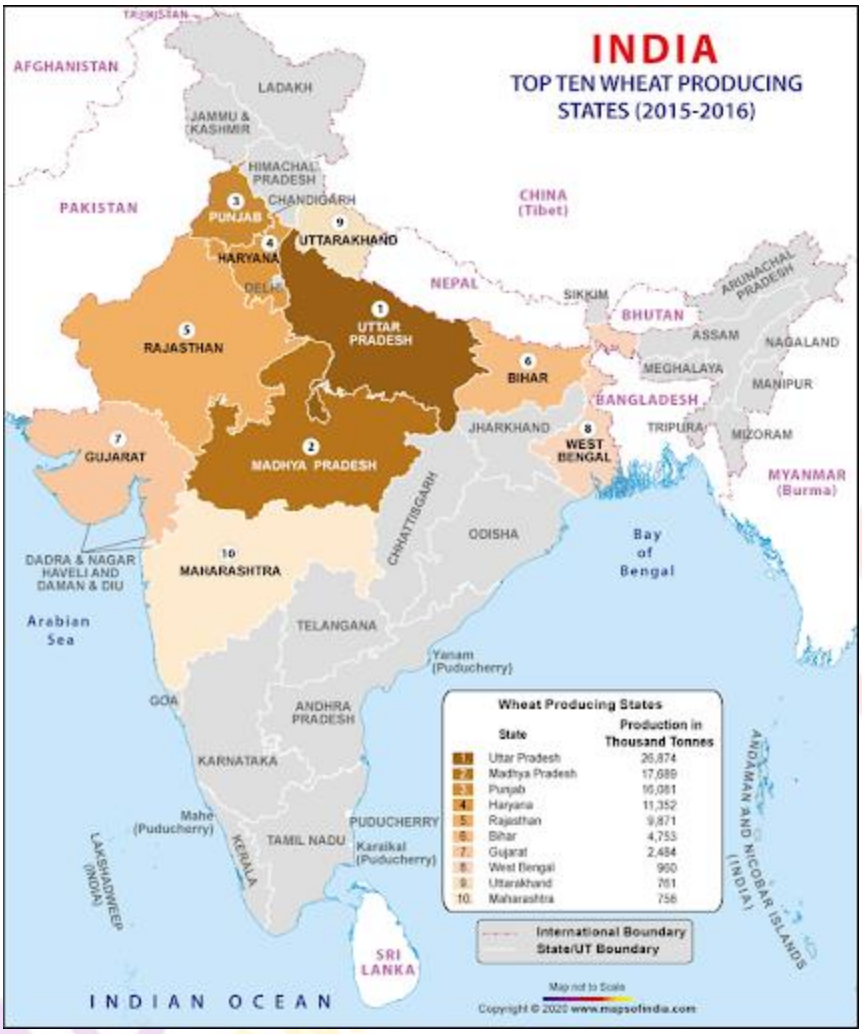
Context: A team of researchers from the Punjab Agricultural University have introduced a new variety of wheat named **PBW1 Chapati.** This variety of wheat has been released at the state level in Punjab for cultivation under timely sown irrigated conditions.

The background:

- Chapati is a flat baked item prepared from wheat and forms a cheap and primary source of protein and carbohydrates in the staple diet of northern and northwestern parts of India.
- Over a period of time, it has been observed that the modern wheat cultivators are unable to produce quality traits that are capable of making the chapati puffable, pliable, and soft with baked wheat aroma.
- Traditionally, C 306 has been the golden standard for Chapati quality.
- This intrigued the researchers to come up with the new variety called **PBW1 Chapati** which possesses the desired quality.

PBW1 Chapati:

- It is produced by addressing the need to increase disease resistance (stripe and brown rust) that can contribute to enhancing the quality of chapati.
- The researchers developed a method that involved marker-assisted selection for a linked stripe rust and leaf rust gene in the background of the new variety. Through several biochemical tests, it was found that the **PBW1 Chapati (also named PBW175)** has retained all the quality parameters after the genetic manipulation that enabled the removal of the genes causing diseases.
- To monitor the presence of the disease causing genes, an instrument called thermocycler was used that facilitates genetic studies through Polymerase Chain Reaction.
- The instruments to measure the quality of the breeds were supported by the Promotion of University Research and Scientific Excellence (PURSE) grant.
- It has shown moderate resistance to Stripe Rust and Leaf Rust disease which is comparatively better than the traditional C 306 variety.
- This variety was found to retain all the quality characteristics desired for making soft (even after baking), nutritious and sweet white coloured chapati.



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