



New Wheat Variety PBW RS1

Context: Recently, the Ludhiana-based institution has developed a new variety of wheat called PBW RS1.

Features

- The variety mentioned contains a significant amount of high amylose starch.
- Resistant starch (RS) found in this variety does not cause a sudden increase in glucose levels.
- The high amylose and resistant starch content contribute to a slower release of glucose into the bloodstream.
- Consumption of amylose starch has been associated with a reduced risk of type-2 diabetes and cardiovascular diseases.
- Food made from whole grain flour of this variety has a lower glycemic index, indicating a slower and more stable increase in blood sugar levels.
- PBW RS1 exhibits a high level of resistance to yellow rust, rendering it immune to the disease.
- When it comes to brown rust, PBW RS1 displays a moderate level of resistance, offering a certain degree of protection against the fungal disease.

Types of Diabetes

- Type 1 Diabetes:
 - Autoimmune disease, immune system attacks insulin-producing cells.
 - Typically diagnosed in childhood or early adulthood.
 - Requires lifelong insulin injections or pump use.
 - Symptoms: excessive thirst, frequent urination, unexplained weight loss, fatigue.
 - Not preventable, exact cause not fully understood.
 - Management involves blood sugar monitoring, balanced diet, exercise, insulin.
- Type 2 Diabetes:
 - Metabolic disorder, insulin resistance or inadequate insulin production.
 - Most common form (90-95% of cases).
 - Associated with obesity, sedentary lifestyle, poor diet.
 - Can develop at any age, more common in adults.
 - Symptoms: increased thirst, frequent urination, fatigue, slow healing, infections.
 - Managed with lifestyle changes, including diet, exercise, weight loss, medication if needed.
 - Prevention/delay through maintaining healthy weight, physical activity, healthy diet.

Glycemic Index

- The glycaemic index (GI) is a rating system for foods containing carbohydrates. It shows how quickly each food affects your blood sugar (glucose) level when that food is eaten on its own.

Glycemic Index

Low GI (<55), Medium GI (56-69) and High GI (70>)

Grains / Starches		Vegetables		Fruits		Dairy		Proteins	
Rice Bran	27	Asparagus	15	Grapefruit	25	Low-Fat Yogurt	14	Peanuts	21
Bran Cereal	42	Broccoli	15	Apple	38	Plain Yogurt	14	Beans, Dried	40
Spaghetti	42	Celery	15	Peach	42	Whole Milk	27	Lentils	41
Corn, sweet	54	Cucumber	15	Orange	44	Soy Milk	30	Kidney Beans	41
Wild Rice	57	Lettuce	15	Grape	46	Fat-Free Milk	32	Split Peas	45
Sweet Potatoes	61	Peppers	15	Banana	54	Skim Milk	32	Lima Beans	46
White Rice	64	Spinach	15	Mango	56	Chocolate Milk	35	Chickpeas	47
Cous Cous	65	Tomatoes	15	Pineapple	66	Fruit Yogurt	36	Pinto Beans	55
Whole Wheat Bread	71	Chickpeas	33	Watermelon	72	Ice Cream	61	Black-Eyed Beans	59
Muesli	80	Cooked Carrots	39						
Baked Potatoes	85								
Oatmeal	87								
Taco Shells	97								
White Bread	100								

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Mega Conclave on “Strengthening PACS through FPOs”

Context: Shri Amit Shah, Union Home Minister and Minister of Cooperation, will inaugurate the "Strengthening PACS through FPOs" mega conclave in New Delhi on July 14th.

- The upcoming mega conclave aims to address the topic of strengthening Primary Agricultural Credit Societies (PACS) through Farmer Producer Organizations (FPOs).
- The conclave is in line with Prime Minister Shri Narendra Modi's vision of "Sahkar se Samridhhi."
- Recently, a decision was made to establish 1100 new FPOs in the cooperative sector.
- The conclave will provide a platform to discuss strategies and measures to enhance the role and effectiveness of PACS through the integration of FPOs.
- Participants will include policymakers, government officials, experts, and stakeholders from the cooperative and agricultural sectors.

Farmer Producer Organisations (FPOs)

- FPOs (Farmer Producer Organizations) are voluntary organizations controlled by farmer-members who actively participate in decision-making.
- The FPOs registration can be done either through the Companies Act of 2013 or through the State Cooperative Societies Act.
- FPOs provide education and training to their farmer-members, representatives, managers, and employees to enhance their contributions.
- FPOs in states like Gujarat, Maharashtra, Madhya Pradesh, Rajasthan, and others have shown positive outcomes and achieved higher returns for farmers.
- An example is the tribal women in Pali district, Rajasthan, who formed a producer company and are receiving better prices for their custard apples.
- Under FPO Scheme, each FPO (Farmer Producer Organization) under the FPOs Scheme receives financial assistance of Rs. 33 lakh.
- Cluster Based Business Organizations (CBBOs) supporting FPOs receive financial assistance of Rs. 25 lakh per FPO.

Primary Agriculture Cooperative Societies (PACS)

- PACS (Primary Agricultural Credit Societies) are cooperative credit societies operating at the village level.
- They form the final link in a three-tier cooperative credit structure, with the State Cooperative Banks (SCBs) at the state level and District Central Cooperative Banks (DCCBs) at the district level.
- Credit from SCBs is transferred to DCCBs, which collaborate with PACS in providing credit services to farmers.
- PACSs play a vital role in offering short-term and medium-term agricultural loans to farmers for various farming activities.
- The first PACS was established in 1904, marking the beginning of this cooperative credit system.

Regulation of OTT Services

Context: The Telecom Regulatory Authority of India (TRAI) has initiated discussions to explore regulatory measures for over-the-top (OTT) communication services such as WhatsApp, Zoom, and Google Meet.

- The Draft Telecom Bill proposed bringing OTT services under regulation through licensing.
- The IT Ministry is responsible for regulating OTT services.
- TRAI initially recommended against immediate regulatory intervention for OTT platforms, favouring market forces.
- However, TRAI suggested monitoring the sector and intervening at an appropriate time.
- The DoT requested TRAI to reconsider its recommendations and propose a regulatory mechanism for selective banning of OTT services.

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Telecom Regulatory Authority of India (TRAI)

- The Telecom Regulatory Authority of India (TRAI) was established in 1997 through an Act of Parliament to regulate telecom services and tariff fixation/revision.
- TRAI's mission is to facilitate the growth of telecommunications in India, positioning the country as a leading player in the global information society.
- TRAI aims to create a fair and transparent policy environment that encourages competition and ensures a level playing field.
- The TRAI Act was amended in 2000 to establish the Telecommunications Dispute Settlement and Appellate Tribunal (TDSAT) to handle adjudication and dispute resolution functions.
- TDSAT is responsible for resolving disputes between licensors, licensees, service providers, and consumers, as well as hearing appeals against TRAI's directions, decisions, or orders.

OTT Services

- OTT (Over-the-Top) services are content providers that deliver media directly to users via the internet, bypassing traditional cable or satellite TV services.
- OTT platforms utilize streaming technology to transmit data, including audio and video, in real-time over the internet.
- Examples of popular OTT services include Netflix, Amazon Prime Video, Disney+, Hulu, YouTube, and Spotify.
- These services offer a wide range of on-demand content, such as movies, TV shows, music, and podcasts, accessible anytime and anywhere with an internet connection.
- Users can stream content on various devices, including smartphones, tablets, smart TVs, and computers, without the need for traditional TV subscriptions.

What does the Draft Telecom Bill prescribe for OTT Platforms?

- The draft telecom Bill proposed including over-the-top communication services like WhatsApp, Signal, and Telegram in the definition of telecommunication services.
- Providers of telecommunication services, including OTT services, would be subject to the licensing regime and similar regulations as other telecom operators.
- The aim was to establish a level playing field between telecom service providers and OTT apps in terms of rules and regulations.
- Telecom operators had previously argued that they faced higher costs for licenses and spectrum compared to OTT players who offered free services using their infrastructure.
- The inclusion of OTT services in the licensing regime aimed to address this disparity.

NEWS IN BETWEEN THE LINES

World Population Day 2023



World Population Day:

World Population Day is observed annually on July 11th. It aims to raise awareness about global population growth challenges and their consequences.

Theme for 2023: The theme for World Population Day 2023 is "Unleashing the power of gender equality: Uplifting the voices of women and girls to unlock our world's infinite possibilities."

Significance: World Population Day addresses global population growth challenges like gender inequality, economic crises and poverty. The UN aims to create a future with equal opportunities and aligns with the goals of sustainable development.

Establishment: World Population Day was established by the United Nations Development Programme's Governing Council in 1989. It was inspired by the Day of Five Billion observed on July 11, 1987.

History: The United Nations General Assembly, through Resolution 45/216 in 1990, decided to continue celebrating World Population Day.

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Palliative Care



Recently, there has been a growing need for strengthening palliative care in response to the increasing burden of non-communicable diseases in India.

What is Palliative Care?

- Palliative care is a specialized approach to healthcare that focuses on improving the quality of life for individuals facing serious illnesses.
- It aims to provide comprehensive support to patients and their families by addressing physical, emotional, social and spiritual needs.

India's Burden of Non-Communicable Diseases:

- India is home to nearly 20% of the world's population, with two-thirds residing in rural areas. There has been a significant rise in lifestyle-related non-communicable diseases, such as cancer, diabetes, hypertension, and respiratory diseases.

Availability and Access to Palliative Care:

- Palliative care in India is primarily available in tertiary healthcare facilities in urban areas.
- Access to palliative care is limited, reaching only 1-2% of the estimated 7-10 million people in need.

Need for a Dedicated Palliative Care Program:

- The National Programme for Palliative Care (NPPC) was announced in 2012 but lacks a dedicated budget for implementation.
- NGOs fill some gaps in palliative care, but government involvement and spending are crucial for broader coverage.

e-Tractor & Trucks

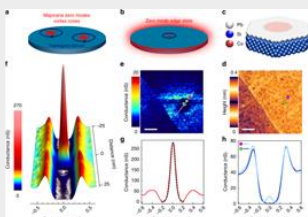


Recently, TI Clean Mobility, a subsidiary of Tube Investments of India Ltd. (TII), announced the establishment of production facilities in Chennai and Manesar for the manufacturing of electric tractors and trucks.

About e-Tractors and Trucks:

- TI Clean Mobility is setting up production facilities for electric tractors in Chennai and electric trucks in Manesar, India.
- Driven by increasing demand and government support, electric tractors offer a cleaner alternative to diesel-powered ones.
- Electric trucks have immense potential in the medium and heavy commercial vehicle segment, contributing to a greener transportation sector.
- Both technologies are still in the early stages of growth and hold promise for reducing air pollution and carbon emissions.
- TI Clean Mobility aims to operate on multiple platforms in the electric vehicle (EV) spectrum and sees immense growth opportunities in the EV segment.

Majorana Zero Modes



Recently, researchers at Microsoft announced a breakthrough in creating a strange particle called Majorana zero modes.

Majorana Zero Modes:

- Majorana zero modes are particles that can be used as qubits in topological quantum computing.
- These particles exhibit non-Abelian statistics and are resistant to losing the information they hold.

Topological Quantum Computing:



- Majorana zero modes enable topological quantum computing, a powerful form of computing.
- Topological quantum computers take advantage of the peculiar mathematical rules of non-Abelian statistics to perform complex computations.

Advantages:

- Majorana zero modes offer increased computational robustness and information protection compared to traditional qubits.

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	<ul style="list-style-type: none"> ➤ Quantum computers based on Majorana zero modes can potentially perform a million quantum operations per second.
<p>Total Expense Ratio</p> 	<p>Recently, the Securities and Exchange Board of India (SEBI) board is expected to discuss important matters related to Foreign Portfolio Investor (FPI) disclosure norms and the Total Expense Ratio (TER) charged by mutual funds.</p> <p>What is Total Expense Ratio?</p> <ul style="list-style-type: none"> ➤ Total Expense Ratio (TER) refers to the percentage of a mutual fund's assets that is charged as expenses to investors. ➤ It encompasses various costs associated with managing and operating a mutual fund. <p>Calculation: TER is calculated by dividing the total expenses incurred by a mutual fund scheme by its average net assets.</p> <p>Components: The expenses covered by TER include sales and marketing expenses, administrative costs, investment management fees, audit fees, registrar fees, transaction costs, custodian fees and other operational expenses.</p> <p>Importance: TER is a crucial metric for investors as it directly impacts the overall return on investment. Lower TER indicates lower expenses and potentially higher returns for investors.</p> <p>SEBI's Proposal:</p> <ul style="list-style-type: none"> ○ The Securities and Exchange Board of India (SEBI) has proposed rationalizing the calculation of TER at the asset management company (AMC) level rather than the scheme level. ○ This aims to bring transparency and reduce costs for investors based on economies of scale.
<p>Place in News</p> <p>Solomon Islands</p>	<p>Recently, the leaders of the Solomon Islands and China met to strengthen their relations, leading to signed agreements on police, economic and technical cooperation.</p> <p>Location:</p> <ul style="list-style-type: none"> ➤ The Solomon Islands is an archipelago consisting of a group of islands located in the western Pacific Ocean. ➤ It is situated northeast of Australia. <p>Capital: The capital city of the Solomon Islands is Honiara.</p> <p>Geography:</p> <ul style="list-style-type: none"> ➤ The country comprises nearly 1,000 islands, with the main islands being Guadalcanal, Malaita, and Choiseul. ➤ It has a diverse range of landscapes, including mountains, rainforests, and coral reefs. <p>Independence: The Solomon Islands gained independence from the United Kingdom on July 7, 1978.</p> <p>Population: The estimated population of the Solomon Islands is around 700,000 people. The majority of the population resides in rural areas.</p> <p>Official Language: The official language of the Solomon Islands is English.</p> <p>Economy: The economy of the Solomon Islands is primarily based on agriculture, forestry, and fisheries. The country is known for its exports of timber, fish, palm oil and copra.</p> 

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