

NEWS TODAY

Food Safety and Standards Authority of India (FSSAI) notifies stricter rules for Antibiotics in food items

To address **growing concern around antimicrobial resistance (AMR)**, FSSAI banned use of specific antibiotics in production of meat, meat products, milk, milk products etc. from April 1, 2025.

- This follows India's commitment to **Muscat Ministerial Manifesto** on AMR in November 2022 agreed upon at **Third Global High-level Ministerial Conference on Antimicrobial Resistance (AMR)**.
 - ⊕ Overall objective of Ministerial Conference on AMR is to accelerate political commitment and generate contributions to the realization of the **WHO Global Action Plan on AMR**.

Antimicrobial resistance (AMR)

- It occurs when **bacteria, viruses, fungi and parasites** no longer respond to antimicrobial medicines which increase risk of disease spread, severe illness, disability and death.
- It is a **natural process** that happens over time through genetic changes in pathogens. It has been accelerated due to **misuse and overuse of antimicrobials**.

Why is AMR a threat?

- **Threat to Human Health:** Nearly 5 million deaths were somehow associated with drug-resistant infections in 2019 (World Organization for Animal Health).
- **Economic Burden:** World Bank estimates that AMR could result in **US\$ 1 trillion additional healthcare costs by 2050**.

Way-forward to address AMR:

- **Biosecurity measures** to prevent introduction and spread of pathogens between farms;
- **Promotion of farming systems** that require low antimicrobial use, such as organic production.
- **Other measures:** One health approach, Vaccinations, alternative measures to augment production including probiotics and prebiotics etc.

Muscat Ministerial Manifesto

Three Global Targets



Reduce Antimicrobial Use

Reduce total antimicrobials in agrifood systems by at least 30-50% by 2030



Preserve Critical Antimicrobials

End the use of medically important antimicrobials for growth promotion in animals



Ensure Appropriate Antibiotic Access

'Access' group antibiotics to represent at least 60% of human antibiotic consumption by 2030

Guidelines for setting up Bio- input Resource Centres (BRC) under National Mission on Natural Farming (NMNF) released

Plan to set up **10,000 BRCs** was first announced during the **Budget 2023-24**.

About BRCs

- They are **cluster-level enterprises** that provide time tested, locally prepared **inputs/formulations** using biological entities to improve soil health, pest management, etc., for **purchase by farmers** in a defined **geographical area**.

Purposes served by BRCs



Maintaining and sale of **cultures of bio-fertilizers** and bio-pesticides for multiplication and use by farmers.



Preparation and sale of **ready-to-use organic inputs**.



Training farmers on the preparations of botanical extracts and animal based inputs.



Sharing knowledge on natural farming practices.



Sale of pheromone traps, lures, sticky traps and others.

Key highlights of the Guidelines

- **Financial assistance:** Rs 1 lakh to be provided for setting up a BRC (Assistance does not include sheds, renting of premises, etc.).
- **Convergence with other Schemes/Programmes:** Like Formation and Promotion of 10,000 Farmer Producer Organisation, National Mission on Edible Oilseeds, etc.
- **Preparation of Bio-Inputs:** As per the requirements of the local farmers, local land-use patterns, soil types and local crop systems.
- **Criteria for BRC entrepreneur group/entity:** BRC must be a practising Natural Farmer or have members with prior experience of Natural Farming (NF).

Significance of the Guidelines

- **Overcoming Challenges in transitioning to NF:** Like non-availability of quality inputs, lack of knowledge, lack of market support, etc.
- **Address Poor state of Organic/Bio-Inputs:** BRC would support farmers in **upscaling NF**.

About NMNF

- **Type:** Standalone Centrally Sponsored Scheme.
- **Ministry:** Agriculture & Farmers' Welfare.
- **Key Objectives:** Promote Nature based sustainable systems of farming.
 - ⊕ To be implemented in **15,000 clusters of willing Gram Panchayats**, covering **1 crore farmers** and **7.5 lakh Hectare area** in next 2 years.

Researchers develops RNA-based antiviral agent that confers strong protection against plant viruses

This Antiviral agent developed by Germany based researchers using RNA silencing provides protection against cucumber mosaic virus (CMV).

➤ In India, CMV is responsible for 25-30% yield losses in banana plantations.

Techniques used by researchers to strengthen plant immunity against CMV:

➤ Researchers explored RNA-based crop protection techniques such as:

⊕ **Host-Induced Gene Silencing (HIGS):**

- ◆ It works by **genetically modifying plants** to produce **virus-fighting double-stranded RNA (dsRNA)** in their own cells.
- ◆ This provides continuous protection throughout the plant's life.

⊕ **Spray-Induced Gene Silencing (SIGS):** In this, Plants are treated with **RNA sprays**. Leaves absorb the RNA, triggering plant's natural immune response **without altering its DNA**.

How Plants' natural defense mechanisms works against viruses using RNA Silencing (RNAi):

- When a virus infects a plant, it **introduces dsRNA**, which acts like a warning signal for the plant.
- The plant responds by activating **Dicer-like enzymes (DCLs)**, which slice the **dsRNA** into small fragments called **small interfering RNAs (siRNAs)**.
- These siRNAs then guide plant's defence system to **destroy viral RNA**.
- ⊕ Not all siRNA generated by plants are effective and **virus often mutates rapidly, evading plant's natural defences**.



What is RNA Silencing:

- RNA silencing is a **gene regulation mechanism** that targets specific RNA sequences for degradation, serving as a **defense mechanism against viruses in plants and other organisms**.
- It can **turn down or completely shut off** the activity of specific genes.
- RNA silencing **involves small RNA molecules (like siRNA or miRNA)** that can bind to messenger RNA (mRNA), a molecule that **carries instructions from DNA to make proteins**.
- ⊕ When these small RNAs bind to mRNA, they either:
 - ◆ **Destroy the mRNA** (so the protein can't be made)
 - ◆ **Block the mRNA** from being read by the cell's protein-making machinery

Micro Finance Institutions (MFIs) to implement revised guidelines, SANKALP 2.0 from June 1st

Categorised under 3 heads, these guidelines aim to address the issue of **pricing, over indebtedness and discipline**.

Key features

- **Pricing of Loans:** MFIs to follow **transparent pricing policies** with the rate of interest justifiable and **approved by Board Members**.
- **Over indebtedness:** Number of **lenders** for MF loans **shall not exceed 3** from all types of lenders.
- **Code of Conduct and Discipline:** No fresh loan to any client who is in **default for more than 60 days** with any lender.

About Microfinance (Microcredit)

- **Meaning:** It refers to the provision of **small credit** to the **low-income individuals/groups** having no other access to financial services.
 - ⊕ MFIs offer multiple services like **savings accounts, fund transfers, micro insurance, and microcredit** and **earn interest on credit**.
- **Origin:** The idea originated with the creation of **Grameen Bank (1983)**, offering small loans to entrepreneurs, by the **Bangladeshi** social entrepreneur **Muhammad Yunus**.

Key Initiatives for regulation of MFIs in India

- **Self-Regulatory Organizations (SROs):** **Microfinance Institutions Network (MFIN)** and **Sa-Dhan** were recognized as SRO by RBI in 2014.
- **Regulatory Framework for Microfinance Loans (2022):** By **RBI** deals with definition of microfinance loans, repayment limits, etc.

Key Issues Faced by MFIs



Absence of Collaterals: MFIs offer credits without collaterals making **loan repayment difficult**.



High rates of interest: MFIs charge 12-30% rate of interest while commercial banks charge 8-12%.



Operational cost: MFIs service **higher number of small debtors** entailing high transaction costs.

Long term vacancy since 2019 to the office of Deputy Speaker (DS) points to Constitutional Anomaly

About DS of the Lok Sabha

- **Background:** The office emerged in 1921 under **Government of India Act, 1919**.
 - ⊕ **Sachidananda Sinha** first held this office in the **Central Legislative Assembly**.
 - ⊕ **M. A. Ayyangar**, became the **first elected DS** post-independence.
- **Election:** **Article 93** provides that Lok Sabha, **as soon as may be**, choose two members of the House to be **Speaker and DS**.
 - ⊕ As per a **long-standing convention**, the post of DS has been offered to the **Opposition**.
- **Resignation and Removal:** **Article 94** deals with **vacation, resignation and removal** (by a resolution passed by a majority of all then members of the House).
 - ⊕ Speaker may **resign** by submitting a resignation to the DS and vice-versa.
- **Duties:** As per **Article 95**, DS performs the duties of Speaker in case of vacancy, absence, etc.

Importance of the office of DS

- **Constitutional Imperative:** It is **not merely ceremonial** as the Constitution places it on an **equal footing** with the Speaker.
- **Essential for continuity, stability, and institutional balance:** As the DS acts as a **second in command** in case of emergency.
 - ⊕ **M.A. Ayyangar** served as the **acting Speaker** after the sudden death of Speaker G.V. Mavalankar in 1956.
- **Legislative Responsibilities:** DS chairs key sessions, leads committees, and manages sensitive debates requiring neutrality and authority.

Issues with the Vacancy

<p>Centralisation of procedural power within the Speaker (belonging to ruling party).</p>	<p>Disregard for Constitutional Mandate.</p>	<p>May sideline the politics of Inclusivity and Consensus.</p>
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Conclusion

A **specific deadline** (E.g., 60 days of the first sitting of the new Lok Sabha) or a **statutory mechanism** could be introduced to ensure appointment within a **timeframe**.

One crore 49 lakh passengers benefited from regional air travel scheme UDAN

UDAN aims to connect Tier-2 and Tier-3 cities and underserved regions of India with major cities, boosting regional connectivity and economic development.

Key Features of the UDAN (Ude Desh Ka Aam Nagrik) Scheme

- **Launch:** In Oct, 2016 under **National Civil Aviation Policy 2016** with a market-driven yet financially supported model.
 - **Type:** Central sector scheme
 - **Goal:** Boost air connectivity and infrastructure in remote/underserved areas; make flying affordable.
 - **Benefits**
 - ⊕ **Subsidized seats for passengers:** Travel fee is capped (initially it was capped to Rs.2500- per passenger).
 - ⊕ **Support to Airlines:** Government compensates in the form of Viability Gap Funding (VGF) to airlines for losses due to low fares.
 - **Funding Mechanism:** Regional Connectivity Fund (RCF), financed by levies on select domestic flights, facilitates self-financing mechanism of scheme by funding VGF.
 - **Implemented By:** Ministry of Civil Aviation
- ### Challenges in implementing UDAN Scheme:
- **Financial Sustainability & VGF Dependence:** Heavy reliance on subsidies; airlines struggle to break even on low-demand routes.
 - **Infrastructure Deficiencies:** Many regional airports lack terminal capacity, navigational aids, runway length, ATC systems, and ground services
 - **Operational Hurdles:** High operating costs due to inconsistent passenger demand, inadequate infrastructure, and route unviability.
 - **Policy & Regulatory Gaps:** Poor coordination between central/state governments and stakeholders; delays from regulatory bottlenecks and land acquisition issues.

Key Achievements of UDAN (2016–2025):

- **625 routes operationalized**, connecting 90 airports, including 15 heliports and 2 water aerodromes.
- **The airport network expanded** from 74 (2014) to 159 (2024).
- **Boosted regional trade, tourism, and healthcare access:** Improved connectivity to destinations like Khajuraho, Amritsar, Ajmer, Deogarh, and Northeast India.

Also In News



Alfalfa (or lucerne)

India is preparing the ground for restricting the import of genetically modified (GM) versions of Alfalfa from USA.

About Alfalfa

- **Family:** It is a **perennial flowering plant in legume family** Fabaceae.
- **Nutritional Value:** High in protein, calcium, vitamins (A, D), and minerals
- **Climate:** Grows best in temperate climates with good sunlight
- **Production:** More than half of alfalfa is produced in United States, Russia, and Argentina.
- **Nitrogen Fixation:** Improves soil fertility due to symbiotic bacteria in its root nodules.
- **Origin:** Native crop to **arid and semi-arid regions**, and is considered to have originated from present-day **Iran and Turkey**.



Long Term Visas (LTVs)

Ministry of External Affairs clarified that LTVs for Hindu Pakistani nationals remain valid despite visa suspension.

About LTVs

- It permits the visa holder to stay in India for more than **180 days**.
- **Some cases** where it is issued:
 - ⊕ **Pakistan, Bangladesh and Afghanistan nationals** with valid travel documents **seeking permanent settlement in India including citizenship**.
 - ⊕ Extension to Pakistan nationals who could **not renew the Pakistani passport**.
 - ⊕ Persons from **minority communities** in Afghanistan, Bangladesh and Pakistan entering on or before 31st December, 2014, with/without travel documents.
 - ⊕ **Foreign nationals** who claim to be **refugees**.



Padma Awards

President of India presents padma awards 2025 at the civil investiture ceremony-I.

About Padma Awards

- Among the **highest civilian honours** in India.
- **Announced annually** on the eve of **Republic Day**.
- **Three categories:**
 - ⊕ **Padma Vibhushan:** For exceptional and distinguished service
 - ⊕ **Padma Bhushan:** For distinguished service of a higher order
 - ⊕ **Padma Shri:** For distinguished service
- Recognizes achievements in **all fields** where an element of **public service** is involved.
- **History and Suspension:** **Instituted in 1954;** not awarded during **1978–79** and **1993–97**.
- **Selection Process:**
 - ⊕ Recommendations made by the **Padma Awards Committee**, constituted by the **Prime Minister** every year.
 - ⊕ **Public nominations** allowed, including **self-nominations**.
- **Not a title:** Cannot be used as a **prefix** or **suffix** to the awardee's name.



Trends in world military Expenditure, 2024

Stockholm International Peace Research Institute (SIPRI) releases trends in world military expenditure, 2024.

Key highlights

- **Global military spending** rose to **\$2718 billion** in **2024**, a **9.4% increase** which is **steepest since the Cold War**.
- Total military expenditure accounted for **2.5% of global gross domestic product (GDP)** in 2024.
- **Top five spenders:** USA, China, Russia, Germany, and India (60% of total).
- **Europe saw a 17% rise**, driven by the Ukraine war; Germany up 28%, Poland up 31%.
- **Middle East spending rose 15%;** Israel up 65%, Lebanon up 58%.
- India spent **\$86.1 billion** in 2024 which is **2.3% of its GDP**.



Gyan Post

India Post unveils 'Gyan Post' to boost education access across the country.

About Gyan Post

- It is a **postal service that enables affordable delivery** of books and study material through **post offices** across the country bridging the educational gap.
- It covers **only non-commercial, educational material** with real time tracking.
- Publications of a **business or commercial nature, or containing advertisements** are excluded.
- Each book to carry the name of the printer/publisher as per prescribed conditions.
- **Concessional Pricing:**
 - ⊕ ₹20 for packages up to 300 grams.
 - ⊕ ₹100 for packages up to 5 kilograms.



Cholistan Desert

Following protests in Sindh, Pakistan suspended its **canals project** that includes Cholistan Canal meant for irrigating **Cholistan Desert**.

About Cholistan Desert (Rohi)

- **Location:** Western part of **Thar desert, Pakistan**.
- **Background:** Once watered by **Hakra river** which changed its course around 600 B.C. making the area inhospitable.
- **Historical Significance:** Home to an **Indus Valley culture** based on agriculture, housed various **medieval forts** aiming to protect and enable the desert caravan routes.
 - ⊕ **Derawar fort** is the best surviving example of this series of historic forts.



Banarasi Shehnai and Tabla

Geographical Indication (GI) certificates awarded to Banarasi Shehnai and Banarasi Tabla.

About Banarasi Shehnai

- It is an Indian **wind instrument** similar to the oboe in tone and has seven holes on its staff in place of keys.
- Its music is associated with the **temple music** of the country
- It is considered auspicious to play the Shehnai on occasion of most **Indian weddings**.
- It gained **global recognition** through the legendary **Ustad Bismillah Khan**.

About Banarasi Tabla

- Benares tabla gharana was developed a little over **200 years ago** by the legendary **Pandit Ram Sahai**.
- Banaras Gharana is recognized as one of the six principal **tabla gharanas in Indian classical music**.
- Noted tabla player **Padma Vibhushan Pandit Kishan Maharaj** belonged to the Banaras gharana of Hindustani classical music.



Axiom-4 Mission

ISRO has shortlisted 7 microgravity research experiments for the Axiom-4 mission (Ax-4).

- **Microgravity** is a condition in which people or objects appear to be weightless.

About Axiom-4 Mission

- It is a **private spaceflight to the International Space Station (ISS)** operated by **Axiom Space**.
 - ⊕ Axiom Space is a **privately funded, American company** focused on **developing space infrastructure**.
- Axiom Mission 4 crew will launch aboard a **SpaceX Dragon spacecraft** to ISS from NASA's Kennedy Space Center in Florida in 2025.
- Once docked, **private astronauts plan** to spend up to **14 days** aboard an orbiting laboratory, conducting a mission comprised of **science, outreach, and commercial activities**.
- It will send Shubhanshu Shukla to ISS making him first Indian to reach station and **second to go into space after Rakesh Sharma**.



Aqua Insurance

Union Minister of Fisheries, Animal Husbandry & Dairying awarded the first ever **Aqua Insurance** to beneficiaries under **Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY)**.

- **PM-MKSSY**, a sub-scheme under **Pradhan Mantri Matsya Sampada Yojana** offers a **comprehensive aquaculture insurance**.
- Mobile application, **VyAS-NAV**, for the digital based data collection was also launched for **5th Marine Fisheries Census**.

About Aqua Insurance

- **Objective:** Financial support to small and marginalized fisheries' farmers.
- **Beneficiaries:** Registered aquafarmers, firms, companies, societies, cooperatives, Fish Farmer Producer Organizations (FFPOs), etc.
- **Premium:** Capped at **₹1 lakh per farmer for 1800 m³**.
- **Inclusivity:** SC, ST, and women eligible for additional 10% incentive.
- **Duration:** Insurance covers one crop cycle.

