

Climate smart agriculture

- The world's southern continents are reportedly experiencing severe drought due to climate change, which negatively impacts agricultural production and farmers' livelihoods.
- Both population expansion and dietary changes are contributing to an increase in the demand for food
- As a result of climate change, traditional farming practices are becoming less productive.
- Climate change is increasing the dangers faced by farmers, prompting them to reevaluate their practices.
- Climate smart agriculture is an approach for transforming food and agriculture systems to support sustainable development and safeguard food security under climate change.
- **CSA comprises three pillars or objectives**
 - (1) sustainably increase agricultural productivity and incomes;
 - (2) adapt and build resilience to climate change; and
 - (3) reduce/remove GHG (greenhouse gases) emissions, where possible."
- Dimensions of climate smart practices include water smart, weather smart, energy smart, and carbon smart practices.
- They improve productivity, deal with land degradation, and improve soil health.
- The National Action Plan on Climate Change emphasizes the role of climate resilient agriculture in India's adaptation measures.
- Programmes such as the Soil Health Card Scheme use precision nutrient management to optimize agricultural methods
- CSA promotes crop diversification, increases water efficiency, and integrates drought resistant crop types, all of which help lessen the disruptive effects of climate change.
- The importance of CSA lies in its ability to increase agricultural output while maintaining ecological stability.
- This correlation is not only a desired consequence but rather essential for long-term food security and sustainable resource usage in a warming planet.
- By reducing exposure to climate - related dangers and shocks, CSA increases resilience in the face of longer term stressors like shorter

seasons and erratic weather patterns.

- In addition to these benefits, a significant outcome of CSA implementation is the increasing economic autonomy of farmers.
- CSA causes a dramatic change in farming communities' economic and social structure by distributing information about and providing access to climate resilient methods. The increasing popularity of CSA is a promising indicator for the future of biodiversity conservation.
- CSA's ecosystem based approach and different crop varieties help cropland and wild regions coexist together.
- The majority of Indian farmers are small or marginal.
- Therefore, CSA can play a significant role in helping them increase their profits.
- The intersection of climate vulnerability and agricultural importance places India at a unique juncture where CSA adoption is not merely desirable but essential.
- The National Adaptation Fund for Climate Change, National Innovation on Climate Resilient Agriculture, Soil Health Mission, Pradhan Mantri Krishi Sinchayee Yojana, Paramparagat Krishi Vikas Yojana,

Biotech KISAN, and Climate Smart Village are a few examples of government initiatives in India focusing on CSA.

- The Hindu

H9N2

- On November 23, the details shared with the WHO by China indicated that the spike in cases and hospitalisations among children were due to Mycoplasma pneumonia pneumonia since May, and RSV, adenovirus and influenza virus since October

mycoplasma pneumonia

- Mycoplasma pneumonia is an infection of the lungs by the bacteria *Mycoplasma pneumoniae* (*M. pneumoniae*).
- This type of pneumonia is also called atypical pneumonia because the symptoms are different from those of pneumonia due to other common bacteria.

Respiratory syncytial) virus, or RSV, is a common respiratory virus that usually causes mild, cold-like symptoms. Most people recover in a week or two, but RSV can be serious.

- Adenoviruses are a group of viruses that can cause infections.
- Adenovirus infections can happen in kids of any age, but are more

common in babies and young children.

- Adenoviruses are medium-sized, nonenveloped viruses with an icosahedral nucleocapsid containing a double-stranded DNA genome.

The Hindu

- **SC on Governor**

- The Court's reading of the scheme of Article 200, which deals with grant of assent to Bills, is in line with the core tenet of parliamentary democracy: -
- that an elected regime responsible to the legislature runs the State's affairs.
- While granting assent is a routine function, the other options withholding assent or reserving a Bill for the President's consideration have been subjects of controversy.
- There is a proviso to the Article which states that "as soon as possible", the Governor may return the Bill (if it is not a Money Bill) to the House for reconsideration, but when the Bill is passed again, with or without changes, he cannot withhold assent
- The Supreme Court has now read the power to withhold assent and the proviso in conjunction, holding that whenever the Governor withholds

assent, he has to send the Bill back to the legislature for reconsideration.

- This effectively means that the Governor either grants assents in the first instance or will be compelled to do so after the Bill's second passage.
- The Court has done well to point out that Governors, in a system that requires them to function mainly on the aid and advice of the Council of Ministers, cannot withhold action on Bills and must act as soon as possible.
- This is a clear reprimand administered to Governors who believe they can endlessly delay action on Cabinet or legislative proposals because of the absence of a prescribed timeframe.
- The Ministry maintained that it is closely monitoring the reported outbreak of H9N2 cases and clusters of respiratory illness in children in northern China.
- It, however, maintained that there is a need for strengthening surveillance among human, animal husbandry and wildlife sectors, and improving coordination.

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- It maintained that India is prepared for any kind of public health exigency
 - Influenza A virus subtype H9N2 (A/H9N2) is a subtype of the species Influenza A virus (bird flu virus).
 - H9N2 is the most common subtype of influenza viruses in Chinese chickens and thus causes great economic loss for the poultry industry, even under the long-term vaccination programs.
 - The H9N2 influenza virus can be transmitted by air droplet, dust, feed, or water. Chickens usually seemed to be healthy after the infection but some of them do show depression and ruffled feathers. The virus replicates itself in the trachea.
 - The Hindu
- Tyrosinemia Type 1, Gauchers Disease, Wilson's Disease, and the DravetLennox Gastaut Syndrome**
- Providing relief to patients with rare diseases across India, the Union Health Ministry has made available generic drugs to support the care and treatment of four ailments: Tyrosinemia Type 1, Gauchers Disease, Wilson's Disease, and the DravetLennox Gastaut Syndrome.
 - Tyrosinemia Type I is a rare autosomal recessive genetic metabolic disorder characterized by lack of the enzyme fumarylacetoacetate hydrolase (FAH), which is needed for the final break down of the amino acid tyrosine.
 - Gaucher (go-SHAY) disease is the result of a buildup of certain fatty substances in certain organs, particularly your spleen and liver.
 - This causes these organs to enlarge and can affect their function.
 - The fatty substances also can build up in bone tissue, weakening the bone and increasing the risk of fractures.
 - Wilson disease (hepatolenticular degeneration) is a rare, autosomal recessive disorder caused by abnormal copper accumulation in the body particularly involving the brain, liver, and cornea.
 - It affects 1 in 30,000 individuals and may present as weakness, abdominal pain, jaundice, personality change, seizures, etc.
 - Dravet syndrome is a genetic epilepsy. The majority of children are found to have a mutation in the SCN1A gene, or sodium channel gene, whereas Lennox-Gastaut is an epilepsy syndrome with a myriad of etiologies.
 - Epilepsy is a disorder of the brain characterized by repeated seizures. A seizure is usually defined as a sudden

alteration of behavior due to a temporary change in the electrical functioning of the brain

- The Ministry is also in the process of making available drugs for more rare diseases, including Phenylketonuria and Hyperammonemia, over the next few months.
- Phenylketonuria, also called PKU, is a rare inherited disorder that causes an amino acid called phenylalanine to build up in the body.
- PKU is caused by a change in the phenylalanine hydroxylase (PAH) gene. This gene helps create the enzyme needed to break down phenylalanine.

PHENYLALANINE

- Is essential amino acid
- Normally degraded by way of the tyrosine pathway
- Phenylalanine and tyrosine are precursor amino acids for important compounds like:

DEFINITION

Phenylketonuria (PKU) : is a genetic disorder that is characterized by an inability of the body to utilize the essential amino acid, phenylalanine.

SUMMARY

- Phenylketonuria is genetic disorder
- characterized by an inability of the body to utilize the essential amino acid, phenylalanine.
- phenylalanine hydroxylase, is completely or nearly completely deficient.

- Hyperammonemia is a metabolic condition characterized by the raised levels of ammonia, a nitrogen-containing compound. Normal levels of ammonia in the body vary according to age. Hyperammonemia can result from various congenital and acquired conditions in which it may be the principal toxin.

- The Hindu

CERT-IN

- CERT-In is operational since January 2004. The constituency of CERT-In is the Indian Cyber Community. CERT-In is the national nodal agency for

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responding to computer security incidents as and when they occur.

- CERT-In has been designated to serve as the national agency to perform the following functions in the area of cyber security:
- Collection, analysis and dissemination of information on cyber incidents.
- Forecast and alerts of cyber security incidents. Emergency measures for handling cyber security incidents
- Coordination of cyber incident response activities.
- Issue guidelines, advisories, vulnerability notes and whitepapers relating to information security practices, procedures, prevention, response and reporting of cyber incidents.
- Such other functions relating to cyber security as may be prescribed.
- [The Hindu](#)