National Agriculture Code

For Prelims: **Bureau of Indian Standards**, **National Building Code**, **National Electrical Code**, **Internet-of-Things**, **International Organization for Standardization**, International Electro-technical Commission.

For Mains: National Agriculture Code, Standardization in Agriculture, Agricultural Policies in India, Government Policies & Interventions.

Source: IE

Why in News?

The **Bureau of Indian Standards (BIS)** is in the process of formulating the **National Agriculture Code (NAC),** an ambitious project that seeks to establish standards across the entire agriculture cycle.

- This initiative, modelled after the **National Building Code (NBC) of India 2016** **and** **National Electrical Code (NEC) of India 2023,** aims to enhance agricultural practices and provide clear guidelines for farmers, policymakers, and other stakeholders.
- In conjunction with drafting the NAC, the BIS is establishing **Standardised Agriculture Demonstration Farms (SADF)** at select agricultural institutes.

Note: The tentative deadline for completing the NAC is set for October 2025.

What is the National Agriculture Code (NAC)?

- **Purpose**: The NAC aims to establish a **standardised framework for agricultural practices** across the entire agricultural cycle, from field preparation to storage of produce. It seeks to address areas that are **currently unregulated by existing standards.**
  - Currently, the BIS has established **standards for agricultural machinery** and inputs, but there remains a **significant gap in the regulation of agricultural practices.**
- **Scope**: The NAC will cover all agricultural processes, including **crop selection, land preparation, sowing, irrigation, soil health management, harvesting, post-harvest operations,** and storage.
  - It will also include standards for inputs like **fertilisers, pesticides, and weedicides.**
  - The NAC will incorporate standards for modern practices like **natural farming**, **organic farming,** and the use of **Internet-of-Things (IoT)** technology in agriculture.
- **Structure**: The code will be divided into **two parts:**
  - The first part will outline general **principles applicable to all crops.**
  - The second part will focus on **crop-specific standards** for various types of crops such as paddy, wheat, oilseeds, and pulses.
- **Objectives:** To create a **national code that considers agro-climatic zones,** crop types, socio-

economic diversity, and all aspects of the agri-food value chain.
    - To foster a **quality culture in Indian agriculture** by guiding policymakers and regulators in incorporating NAC provisions into their schemes and regulations.
    - To provide a comprehensive guide for farmers, facilitating informed decision-making in agricultural practices.
    - To address horizontal aspects of agriculture, including **SMART farming,** sustainability, traceability, and documentation.
- **Guidance for Stakeholders**: The NAC will serve as a reference for farmers, agricultural universities, and policymakers, helping them make informed decisions and incorporate best practices into their operations.
- **Training and Support**: After the code is finalised, the BIS plans to provide training programs for farmers to help them understand and implement the standards effectively.

What are the Challenges in formulating a National Agriculture Code in India?

- **Diverse Agricultural Practices**: India has a wide range of **climates (15 agro-climatic zones) and soil types,** making it difficult to **create a one-size-fits-all set of standards**. Tailoring the NAC to accommodate these variations can be challenging.
- **State vs. Central Jurisdiction**: **Agriculture is a state subject** in India under the **Entry 14 of the State List in the Seventh Schedule** of the Constitution of India, which can lead to potential **conflicts between central and state regulations.**
    - Harmonising these laws while respecting state rights is a significant challenge.
- **Resource Constraints:** Many smallholder farmers may lack the resources or infrastructure to adopt new practices recommended by the NAC.
    - This includes access to **modern equipment, quality seeds, and efficient irrigation systems.**
    - Engaging these groups in the formulation process is essential to ensure acceptance.
- **Technological Barriers**: While the code aims to promote technology adoption, many farmers may lack access to the **necessary technology or skills.** Addressing these gaps is essential to realise the benefits of the code.
- **Data and Research Gaps**: There may be a lack of comprehensive data on **agricultural practices, yields, and market trends,** hindering evidence-based policy formulation. Addressing these gaps is crucial for creating an effective code.

What Can be Done to Address the Challenges in formulating NAC?

- **Customisation and Flexibility:** Develop region-specific guidelines within the NAC to address the diverse agro-climatic conditions across India.
    - Ensure the NAC is scalable and adaptable to different farm sizes and resource levels, from smallholder farms to large agricultural enterprises.
- **Environmental Considerations**: The code must address issues such as **land degradation, water scarcity,** and **climate change** while promoting agricultural growth.
- **Capacity Building:** Create hands-on training programs for farmers on the NAC and develop mobile apps like **Meghdoot** and platforms like **e-NAM** **and Kisanbandi** for real-time advice and information sharing.
- **Policy and Regulatory Support:** Establish a supportive legislative framework for the NAC to ensure enforceability and create incentive structures, like **tax benefits and recognition programs,** to reward farmers for compliance.

Agricultural Policy in Other Countries

- **Common Agricultural Policy (CAP):** Agriculture is the only sector in the **European Union (EU)** with a common policy, the CAP, provides subsidies, direct payments to farmers, supply controls, and overall support for farmers.
- **Growing Forward 2 (GF2):** It is a five-year federal-provincial-territorial policy framework for **Canada's agriculture and agri-food sector.** It focuses on innovation, competitiveness, and market development.

Standardised Agriculture Demonstration Farms (SADF)

- SADF farms will serve as experimental sites to test and implement various agricultural practices and new technologies in line with Indian Standards.
- These farms will offer a platform for extension officials, farmers, and industry professionals to learn about standardised agricultural practices, supported financially by the BIS.

What is the National Building Code of India?

- The NBC is a model code that provides comprehensive guidelines for all agencies involved in building construction.
    - It was first published in 1970, revised in 1983, and in 2005. The current version, **NBC 2016, was introduced to address the changing landscape of building construction.**
- **Key Provisions of the NBC 2016:** Emphasises the involvement of professionals for effective project execution and features a streamlined, **single-window approval process** that allows for enhancing the **ease of doing business** and promotes **Digitalization**.
    - Accessibility requirements have been revised to accommodate **persons with disabilities**. Enhanced **fire and life safety** measures are included, particularly for **complex buildings and high-rises.**
    - The code incorporates modern structural standards for safety against disasters and encourages the use of innovative materials and technologies to promote sustainability in construction.

What is the National Electrical Code (NEC) of India?

- The NEC is an all-inclusive **Electrical Installations Code** prepared by **BIS**, providing guidelines for regulating electrical installation practices across the country.
    - NEC was originally formulated in 1985 and revised in 2011 and 2023 to align with contemporary international practices.
- **Key Provisions of the NEC 2023:** Focuses on protective measures against electric shock, fire, and overcurrent. They address the **design, selection, and maintenance of standby power sources for emergencies**.
    - The guidelines ensure safety against electrical faults in agricultural settings, accounting for **external factors like water and corrosive substances.**
    - Additionally, they categorise hazardous areas based on the likelihood of dangerous atmospheres and provide tailored guidelines, while also offering comprehensive standards for **solar installations**, emphasising safety and quality.

Bureau of Indian Standards (BIS)

- BIS is the **National Standard Body of India** established under the BIS Act 2016 for the harmonious development of the activities of standardisation, marking and quality certification of goods. **BIS has its headquarters at New Delhi.**
- BIS provides traceability, tangibility, safe reliable quality goods, minimises health hazards, promotes exports and imports substitute, and controls proliferation of varieties through standardisation, certification and testing.
- It conducts capacity building programs on quality assurance and represents India in the **International Organization for Standardization (ISO) & International Electro-technical Commission (IEC).**
    - IEC is an international standard setting body that publishes international Standards for all electrical, electronic and related technologies.
    - **Standardization Management Board (SMB)** is an apex governance body of IEC responsible for technical policy matters.

Conclusion

The proposed NAC represents a significant step towards modernising agricultural practices in India. As the development process unfolds, stakeholder engagement will be crucial in shaping a code that meets the diverse needs of India's agricultural landscape.

Drishti Mains Question:

Discuss the objectives and significance of the National Agriculture Code in transforming agricultural practices in India.

UPSC Civil Services Examination, Previous Year Question (PYQ)

***Mains*:**

Q. Given the vulnerability of Indian agriculture to vagaries of nature, discuss the need for crop insurance and bring out the salient features of the Pradhan Mantri Fasal Bima Yojana (PMFBY). **(2016)**