

1. Scaling up Indian agri-tech start-ups

Context:

- The year 2019 turned out to be a golden year for the 450-odd registered agriculture-technology start-ups, as they witnessed a growth rate of 25% (Nasscom, 2019).

Why agri start-ups are important?

- Indian agricultural ecosystem is **thickly populated by smallholders** and **driven by informality** in the domestic markets, and **lack of scalability, traceability, transparency in agri-value chains** has made agribusiness less trusted, ill-governed and less remunerative to farmers and/or processors.
- Hence, an end-to-end technology-enabled architecture is necessary to integrate the value chains spanning production, processing and distribution.
- To this end, agri/dairy-tech start-ups have gained salience because technology innovations brought out by these start-ups aim to capture or augment values in every possible “node” of the chain, and **enhance chain traceability and efficiency through smart contract between multiple stakeholders.**

Digital Technology start-ups:

- Digital technology start-ups have unleashed their potential in **improving crop production systems, optimising utilisation of critical resources, enhancing traceability in food supply chains, and improving transparency in transactions.**
- In addition, it provides agricultural market network to connecting farmer producer organisations with wholesale buyers, agri-finance companies, input suppliers, and logistics via market linkages.
- However, the fact is that most of these start-ups are yet to showcase scalable and time-tested solutions.

Steps to sustain the agri start-ups and integrate them into agri-value chains:

- First, especially for agri/dairy-tech start-ups, business-to-business (B2B) is emerging as a revenue-generating segment relative to B2C and, thus, these start-ups need to partner with corporates and government agencies for value creation and appropriation.
- Some of these have already marked their footprints in employment rationalisation, stakeholder empowerment, supply chain integration, processing and exports, resource utilisation, and digital infrastructure.

- Second, **public-private partnership (PPP) in agricultural value chains is gaining ground for start-ups** as they can benefit to private as well as public sector through formalising value chain finance, improving decision-making, streamlining direct benefit transfer or subsidies, accessing large markets and so on.
- Third, **fund-raising remains a challenge as start-ups** require a few critical years to withstand the test of time. Impact investors can, therefore, come forward to enable performing start-ups achieve their scalability and viability in value chain businesses.
- Fourth, **agri-tech start-ups regulation calls for a robust policy framework**—integrating financial inclusion, agribusiness incubation and acceleration, data privacy and sharing, and licensing policies into a single-window system.
- Fifth, **as agriculture and dairying is a state subject**, agriculture and animal husbandry universities and anchored extension agencies need to identify potential start-ups for tie-up for technology solutions such as farming as a service and crop/livestock management.
- **Agribusiness incubation centres should rope in agri-tech start-ups** to sustain technology transfer from lab to land and attain scalability in agri-value chains.
- Sixth, there is an **utmost need for an appropriate institutional design**, incentives and enabling market infrastructure to integrating digital technologies into agri-value chains.

Conclusion:

- In order to doubling the farmer's income in the era of climate change, innovations and agri start-ups are vital.