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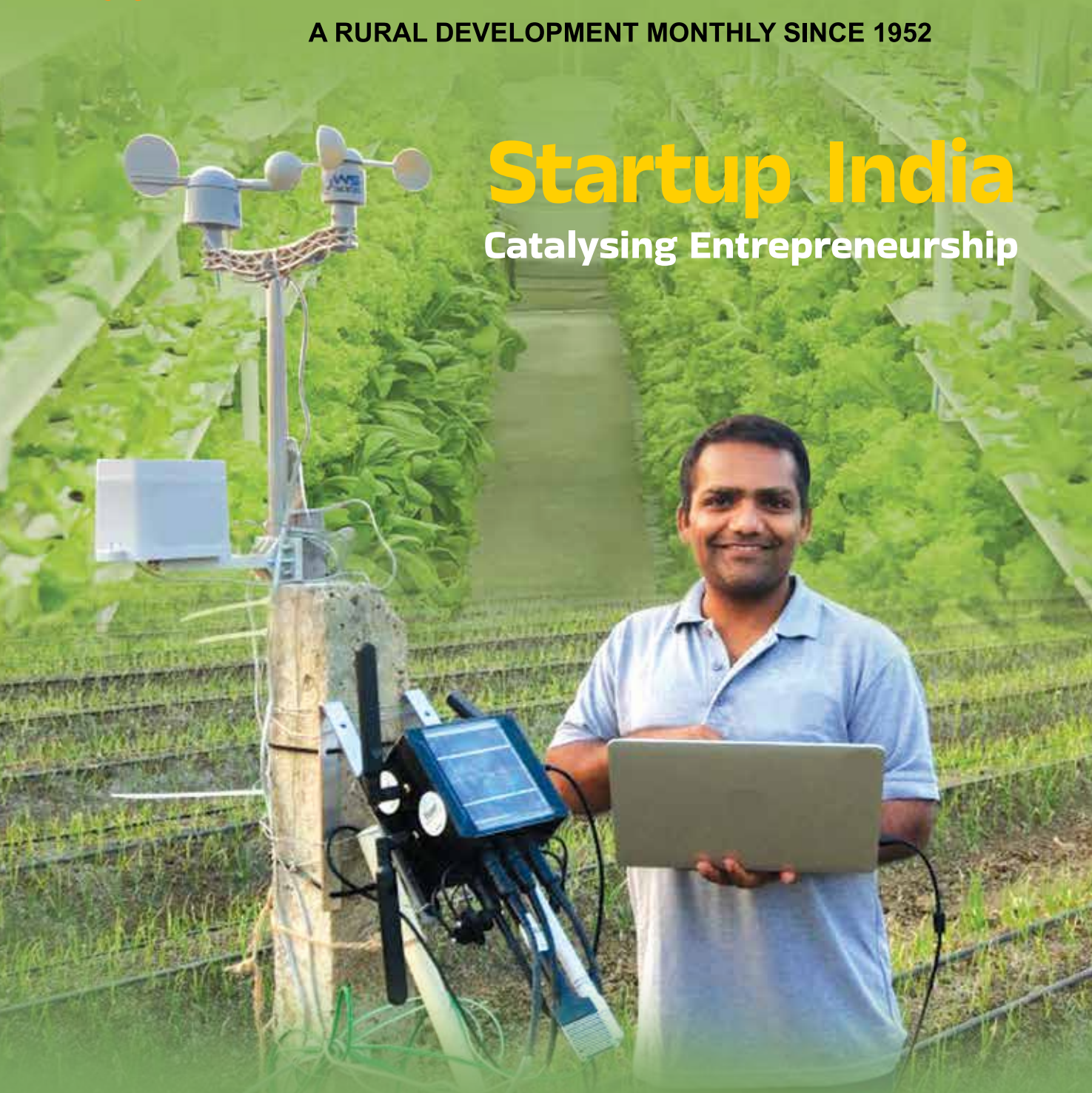

Startup India

Catalysing Entrepreneurship

Startups Powering Future Skills

Startups Sowing Farmer Success

Social Startups Creating Impact

Innovations Turning Waste into Opportunity

Empowering Farmers through Agri Startups

India's agricultural sector is witnessing a paradigm shift as agri-startups leverage innovation, technology, and entrepreneurial energy to address critical challenges in farming and rural livelihoods. Supported by proactive government policies, targeted development programmes, and a robust network of incubators and accelerators, these startups are scaling solutions that enhance productivity, reduce post-harvest losses, and strengthen market linkages. Together, they are driving inclusive growth and shaping a resilient and sustainable future of Indian agriculture.

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Agri-startups have emerged as a transformative force within India's evolving entrepreneurial landscape, blending innovation with the country's enduring agricultural foundations. Startups—whether structured as companies, partnerships, or temporary organisations—play a pivotal role in introducing novel, scalable business models that evolve into economically sustainable enterprises. Globally, innovation remains the cornerstone of startup success, and India has rapidly emerged as one of the world's top five startup hubs. Through flagship initiatives such as Startup India, the government aims to integrate India's domestic entrepreneurial ecosystem with global networks, resulting in remarkable achievements and positioning the country as the world's third-largest unicorn hub.

The Indian agricultural sector remains the primary source of livelihood for 42.3% of the country's population, contributing around 18% to the GDP. The agriculture sector has registered an average annual growth rate of 4.18% over the last five years (Ministry of Finance Economic Survey, 2023-24). Over the past decade, a transformative shift has emerged with the

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Table 1: Investment into agri-startups in India

Year	Total Investment (USD Million)
2018	66.3
2019	112.6
2020	142.0
2021	250.2
2022	178.4
2023	199.8
2024*	~215.0 (Estimated)

Source: *Invest India (2024) Agriculture Sector Profile. Invest India*

rise of agri-startups and innovation-driven enterprises that apply modern technologies and business models to address critical bottlenecks across the agricultural value chain. Data-driven agri-tech startups are significant in countries like India, where they address issues such as supply chain inefficiencies, input price volatility, and labour shortages. These startups leverage technologies to ensure food security, enhance productivity, and build resilience in various agro-ecological zones and farming systems.

Growth of Agricultural Startups in India

India has experienced a remarkable surge in its startup ecosystem in recent years, emerging as the third fastest-growing hub for budding entrepreneurs globally, following the USA and China. According to the Economist Intelligence Unit (EIU) report of April 2023, India ranks tenth in the Business Environment Ranking (BER) among 82 countries for the period 2023–2024. Moreover, in the World Bank's Ease of Doing Business Index 2020, India secured the 63rd position among 190 countries (Press Information Bureau, 2024). To realise the vision of *Aatmanirbhar Bharat* and achieve a $5 trillion Indian economy by 2024–2025, startups are identified as major drivers of development. They have the potential to generate impactful solutions through innovation, thereby serving as vehicles for socio-economic development and transformation.

The Startup India initiative, launched in 2016, has witnessed remarkable success, with the recognition of 131,211 startups by the Department for Promotion of Industry and Internal Trade (DPIIT) in May 2024, resulting in the creation of employment for 0.89 million individuals. India is also home to 107 unicorns. The Indian startup ecosystem experienced a 7.5% increase in the number of venture capital deals, resulting in a $27.5 billion rise in investment.

The agriculture sector of India witnessed a robust growth phase between 2018 and 2021, with investment surging nearly four-fold from USD 66.3 million to USD 250.2 million. This remarkable increase reflects a discernible shift in investor confidence, driven by extensive digital transformation, supportive government initiatives such as Start-up India and the Agri Infrastructure Fund, as well as the emergence of scalable agri-tech business models. Investor confidence is evident through consistent participation from firms like Omnivore across multiple years, signalling sustained interest and faith in the Indian agri-tech landscape. Other repeat investors, including Ankur Capital, Sequoia, and Accel, further underscore the deepening sectoral involvement.

The past decade has seen a significant increase in the number of agri-startups, driven by rising demand for technology-driven solutions in agriculture, government support schemes, and increasing investor interest. According to Start-Up India (2024), more than 3,000 agri-startups have been registered, with a growth rate of approximately 25% per annum since 2016 (Table 2). These startups operate across various areas, including precision agriculture, post-harvest management, input delivery, digital platforms, supply chain management, traceability solutions, and agri-fintech, reflecting increasing technological penetration in rural India.

Table 2. Growth of agri-startups in India

Year	Number of Registered Agri-Startups	Year over Year Growth (%)
2016	180	-
2018	540	40.0
2020	1,250	58.3
2022	2,300	38.4
2024	3,200	28.3

Source: *Startups India Portal, Ministry of Agriculture Reports (2024)*

Proactive Government Policies & Supportive Agri-Startup Ecosystems

India has progressively built a vibrant and innovation-driven startup landscape, propelled by a series of proactive government policies aimed at transforming the country from a population of job seekers to a nation of job creators.

The **Make in India** initiative was launched in 2014 to promote India as a global hub for manufacturing and design. By prioritising investments, skill development, intellectual property protection, and modern infrastructure, it has laid the foundation for technology-led innovations, including those in agri-tech manufacturing. Complementing this effort, the **Startup India** initiative, introduced in 2016 through a comprehensive 19-point action plan, has significantly expanded the startup ecosystem.

Further strengthening the pipeline of innovation, the **Atal Innovation Mission** (AIM) has played a catalytic role in nurturing startups and addressing national challenges through incubators, tinkering labs, and entrepreneurial support systems. Likewise, programmes such as the NewGen Innovation and Entrepreneurship Development Centre (NewGen IEDC), supported by the Department of Science & Technology, enable academic institutions to nurture young innovators by funding early-stage projects.

A major shift in the agricultural startup domain occurred with the launch of the Innovation and Agri-Entrepreneurship Development Programme under RKVY-RAFTAAR (Rastriya Krishi Vikas Yojana-Remunerative Approaches for Agriculture and Allied Sectors Rejuvenation) in the 2018–19 fiscal year. This initiative focuses specifically on fostering agri-entrepreneurship by providing incubation support and financial grants to promising startups. With a network of Knowledge Partners and 24 R-ABIs, the programme has supported over 1,100 agri-startups and trained more than 3,500 entrepreneurs. It has played a critical role in translating innovative ideas—from smart irrigation systems to precision farming tools—into viable businesses that contribute to farmers' income and rural employment generation.

Parallel to policy interventions, the agri-startup ecosystem has flourished due to the emergence of incubators, accelerators, and innovation platforms dedicated to agriculture. Institutions such as MANAGE's Centre for Innovation and Agri-preneurship, a-IDEA at NAARM, and the ICRISAT Agribusiness and Innovation Platform offer end-to-end support for entrepreneurs—from ideation and prototype development to commercialization. These platforms bridge gaps in knowledge, technology, and finance, helping startups reduce gestation periods and achieve scalability. Accelerators such as AGRI UDAAN, CIIE of IIM Ahmedabad, and CIE-IIIT Hyderabad, as well as the MANAGE accelerator**,** have further expanded opportunities by offering mentorship, market linkages, and investment readiness support. Today, India hosts over 100 agriculture-focused incubators, supported by DST, ICAR, Startup India, and RKVY-RAFTAAR, collectively nurturing hundreds of early-stage ventures in the agri-food domain.

The government has also encouraged innovation through national-level platforms such as the Agri India Hackathon, which brings together startups, scientists, and industry leaders to co-create solutions leveraging AI, IoT, and advanced mechanisation. With agri-tech solutions ranging from digital market platforms and weather forecasting tools to solar-powered cold storage, vertical farming, and biogas systems, startups are increasingly able to address structural constraints in Indian agriculture.

Functional Domains of Agricultural Start-ups in India

The agricultural domain, encompassing crops, livestock, and fisheries, has experienced the emergence of numerous startups commonly referred to as "agri-startups." These ventures are further classified based on their specific focus areas, including agri-tech, fisheries, dairy farming, animal husbandry, food processing, organic agriculture, and others. Similarly, they are categorized according to their developmental stages: Ideation, Validation, Early Traction, and Scaling (NAAS, 2022).

Agri-startups have disrupted traditional supply chains, empowered smallholders, reduced post-harvest losses, and improved market linkages through digital platforms and value-added services. The key areas of impact include: (i) Precision Agriculture which involves theuse of IoT, drones, and satellite imaging. Examples include Fasal, CropIn, etc. (ii) Supply Chain and Logistics which optimises farm-to-fork delivery. Examples include DeHaat, Ninjacart, etc. (iii) Input Retailing and Advisory that includes App-based Agri-inputs, crop advisory. Examples include Agro Wave and Agri Bazaar, and (iv) Fintech and Insurance provide access to credit, and weather-based insurance. Examples include *Samunnati* and Gram Cover, among others. Table 3 shows the Functional categories and impact areas of agri-startups in India.

Table 3. Functional categories and impact areas of agri-startups

Category	Examples	Key Impact
Precision Farming	Fasal, CropIn	Increased yield, water use efficiency
Supply Chain	DeHaat, Ninjacart	Reduced wastage, better price realization
Digital Marketplaces	AgriBazaar, BigHaat	Transparent pricing, direct farmer-buyer link
Agri-Fintech	Samunnati, Jai Kisan	Credit access, transaction digitization

Source: *FICCI Report on Agri-Tech in India (2023); NABARD Agri Startup Report (2024)*

The dominance of supply chain and marketplace startups suggests that market inefficiencies and post-harvest losses remain the primary challenges in agriculture sector. Precision agriculture, though still emerging, shows promise in regions like Punjab and Telangana, where drone-based spraying and sensor-based irrigation are being adopted. However, its higher investmentrequirements limit adoption among marginal farmers, reinforcing the need for custom hiring centres and subsidies. Agri-fintech is an emerging segment that addresses financial inclusion, a persistent bottleneck in rural India. Startups like *Samunnati* provide collateral-free loans using AI-based risk profiling, which can significantly reduce dependence on informal credit.

Regional variation of Agricultural startups in India

Agri-startups in India exhibit significant regional variation, with a concentration in Western and Southern states, such as Maharashtra, Karnataka, and Gujarat. Since 2018, the DPIIT of MoC&I, has been conducting the States' Start-up Ranking Exercise. Karnataka and Maharashtra collectively contribute nearly 50% of all agri-tech startups established in the past five years (NAAS, 2022). Noteworthy is Gujarat's status as the "best-performing state" in the Indian startup ecosystem, despite holding only a 7% share in agri-tech startups (DIPP, MoC, 2018). According to the ranking of states on support to startup ecosystems, Gujarat and Karnataka emerged as the best performers (MoC&I, 2022). In contrast, the Northern and Eastern regions generally lag in terms of startup quality and integration into global value chains. The focus areas of these startups are often tied to the specific agricultural infrastructure and challenges of their respective regions. Table 4 illustrates the geographical spread of agri-startups across Indian states, with a focus on their engagements and dominant operational domains.

Table 4: State-wise distribution of agri-startups in India

State/UT	Registered Agri-Startups	Key Focus Areas
Maharashtra	265	Logistics, Fintech, Cold Chain
Karnataka	212	Precision Ag, Export Facilitation
Telengana	189	Farm-to-Fork, Blockchain, Traceability
Andhra Pradesh	177	Input Platforms, Export Aggregation
Uttar Pradesh	156	Credit, Advisory Services
Tamil Nadu	151	Agro-processing, Fintech
Gujarat	138	IoT, Certification
Rajasthan	121	Agri-Education, Soil Mapping
Madhya Pradesh	117	Crop Monitoring, Logistics
Others Combined)	458	Extension, Insurance, Climate Services

Source: *Startup India (2024) Start-up India Portal-Agri-Startups Database. Department for Promotion of Industry and Internal Trade*

Conclusion

Agri-startups in India are steadily reshaping the agricultural landscape by fostering innovation, improving rural livelihoods, and contributing meaningfully to national and global sustainability goals. Their growing focus on environmentally responsible practices—alongside rising global demand for climate-resilient food systems—positions India's agri-startups to play a decisive role in the future of agriculture. With sustained policy support, targeted investment, and continuous capacity-building, these ventures hold the potential to accelerate inclusive growth and enhance the resilience of India's farming communities. As the sector evolves, agri-startups will remain key drivers in steering Indian agriculture toward a more sustainable, productive, and future-ready trajectory. ❑