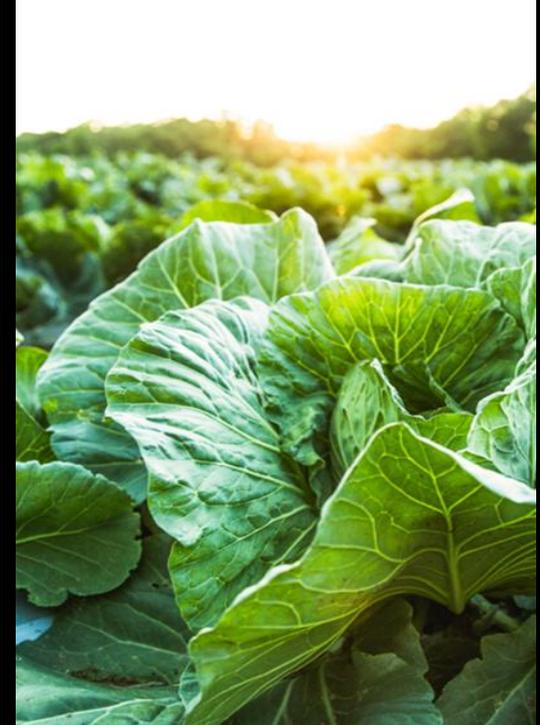


THE MCLEAN SYNDICATE

Food & AgTech Outlook

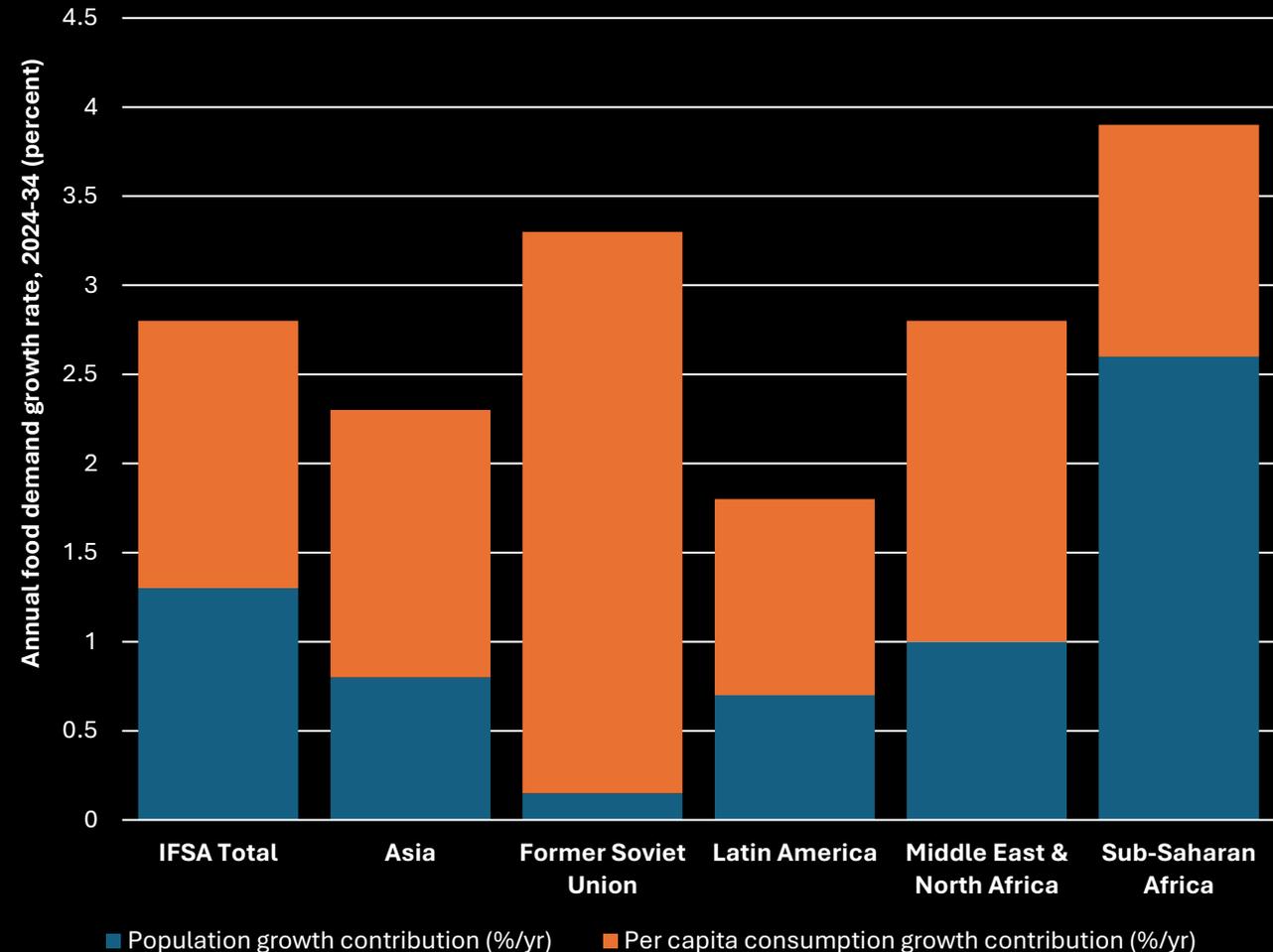
October 2025



Macro Trends

- Rising demand, especially in Asia & Africa, straining input system
- Extreme climate events choking supply
- Resilient crops in favor because of climate change
- Warmer, longer summers increasing supply in northern regions
- AgTech (gene editing, drones, AI) is driving record efficiency gains

Change in Annual Food Demand & Source of Growth (2024-34)



Funding Landscape

Funding Post VC Boom

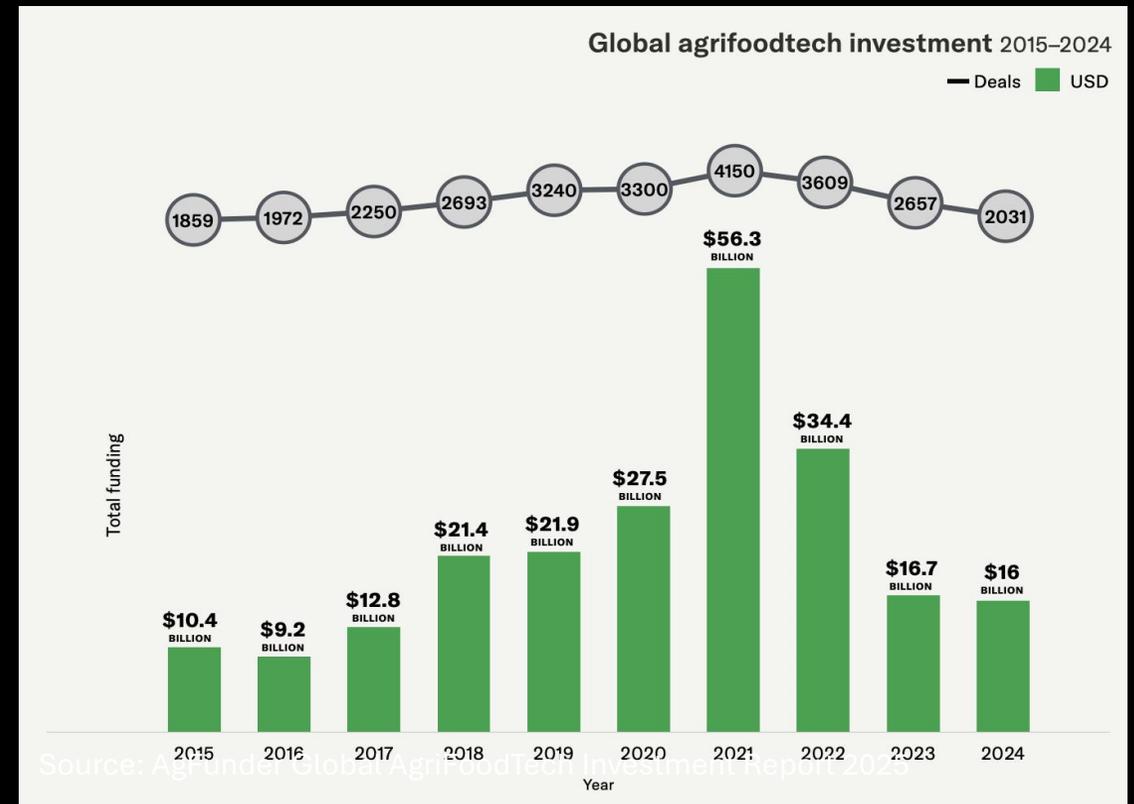
- Global funding fell ~70% from 2021 (~\$53B) to ~\$16B in 2024, then stabilized; deal count down, quality up
- Capital rotated towards “hard ROI” plays while capex/regulatory-heavy bets stalled

Down Rounds

- Widespread in 2023–2025: valuations compressed 40–60% vs. 2021 peaks
- Over half of late-stage deals in agrifoodtech since 2023 were flat or down rounds

IPO Drought

- Public exits remain minimal since late 2021
- No major agrifoodtech IPOs in 2023–25; pipeline companies delayed indefinitely



Foodtech Unicorns



FoodTech Trends



Food Processing & Packaging Market

Large, mature industry with sustainability pressures & operational transformation

Market Dynamics

- Global food processing valued at over \$4T; packaging exceeds \$400B
- Strong shift toward automation, robotics & digital twins

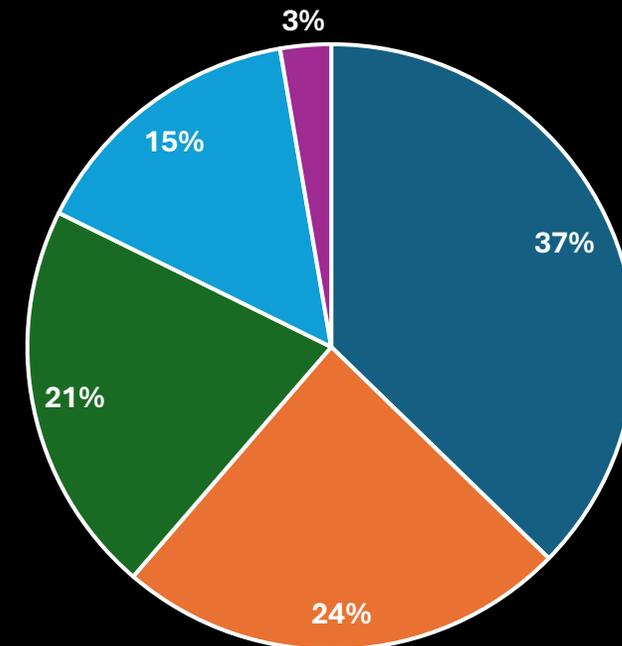
Supply Conditions

- Packaging production capacity expanding
- Manufacturers adapting to sustainability mandates
- Paper & paperboard capture ~30%+ share; increasing use of smart materials

Constraints

- Volatility in raw materials such as plastics & paper
- Waste & recycling infrastructure gaps create operational friction
- Energy costs & broader supply chain disruptions weigh on margins

Market Share of Global Food Processing by Category



■ Fruit, Vegetables, Beverages

■ Meat, Poultry, Seafood

■ Other processed foods

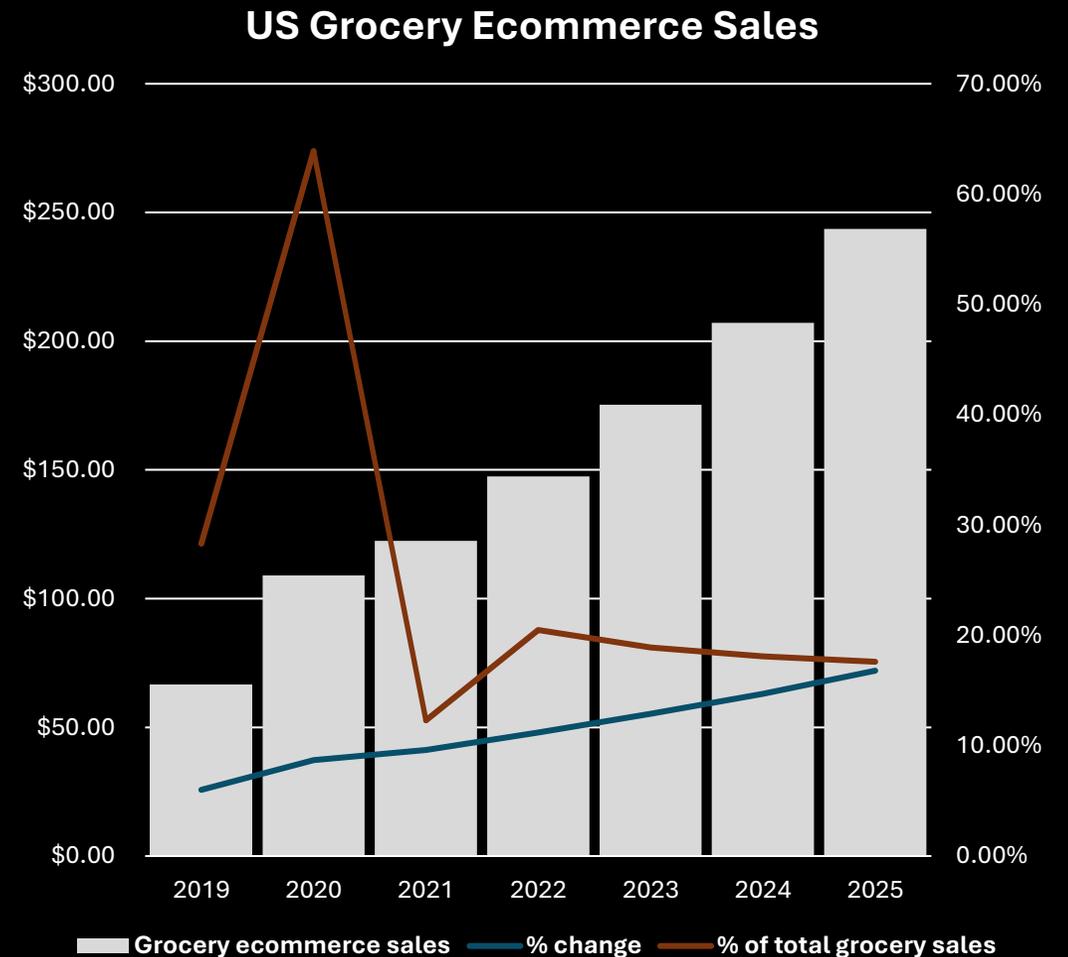
■ Bakery & Snacks (incl. confectionary)

■ Dairy

Food Distribution, Service, & Kitchen Tech

Platforms & automation are transforming delivery, retail & restaurant operations, but profitability challenges persist

- Food delivery apps have become routine in major cities
- Grocery e-commerce expands through retailer partnerships
- Cloud kitchens & dark stores broaden menu choice & compress delivery times
- High logistics & labor costs continue to weigh on unit economics
- Consolidation underway: larger platforms acquiring regional players to expand market share
- Autonomous pilots offer long-term cost relief but remain in early rollouts
- Integration within retail is creating stickier customer bases



Alternative Proteins Market

Alternative Proteins Gain Traction, but Consumer Adoption Lags

Market Dynamics

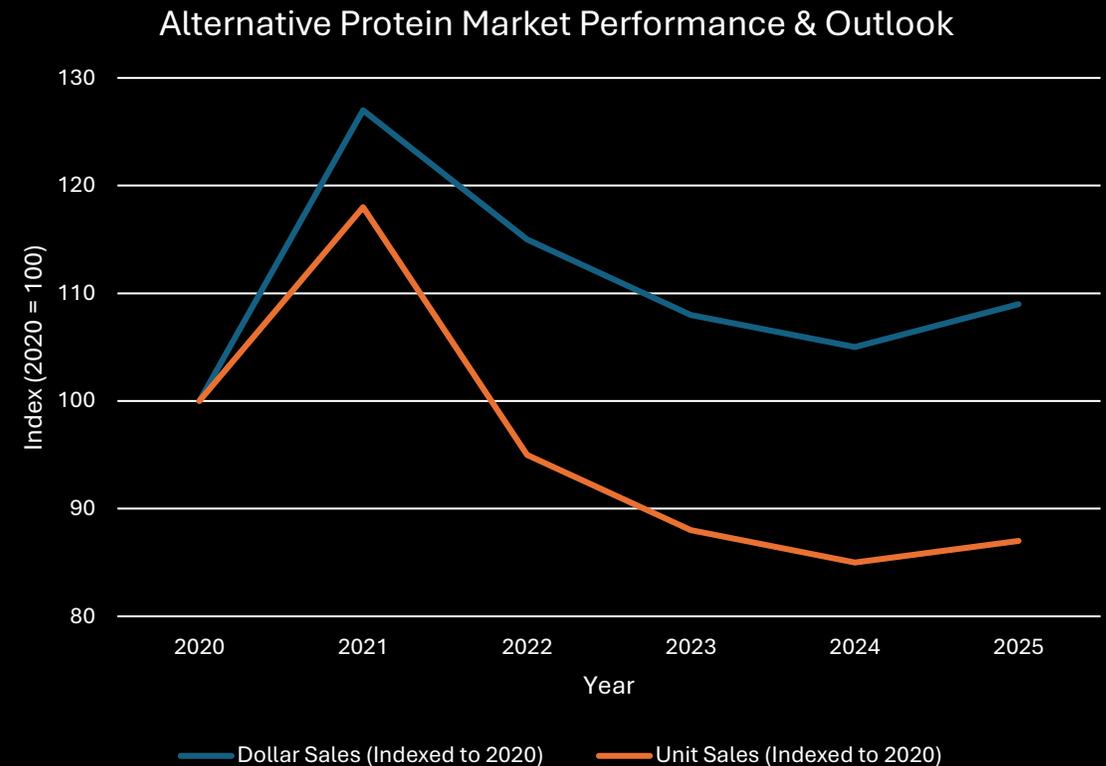
- Global alt-protein market estimated at ~\$25–30B, but growth on a steady decline
- Alt-protein dollar sales up ~9% since 2020, yet unit volumes down ~13, reflecting inflation-driven pricing

Demand Trends

- ~40% of U.S. consumers tried plant-based meat in past year, but repeat adoption remains limited
- Growth pockets emerging in protein powders, hybrid blends & feed applications
- In the U.S., 53% of Americans report having eaten plant-based meat at some point; ~40% in the past year

Path Forward

- Focus on high-value additives, functional proteins & feed replacements over mass meat analogues
- Explore climate-resilient crops & regional specialization to sustain competitiveness



Food Service & Kitchen Tech

Automation & digital tools are reshaping kitchens, but adoption remains uneven

Market Dynamics

- Broad category spanning back-of-house automation, ordering systems & connected appliances
- Adoption strongest in Quick-Service Restaurants, institutional foodservice & urban restaurants seeking efficiency
- Hitachi, Fagor, Bosch-Siemens & Haier account for ~40% share of the global smart appliance market

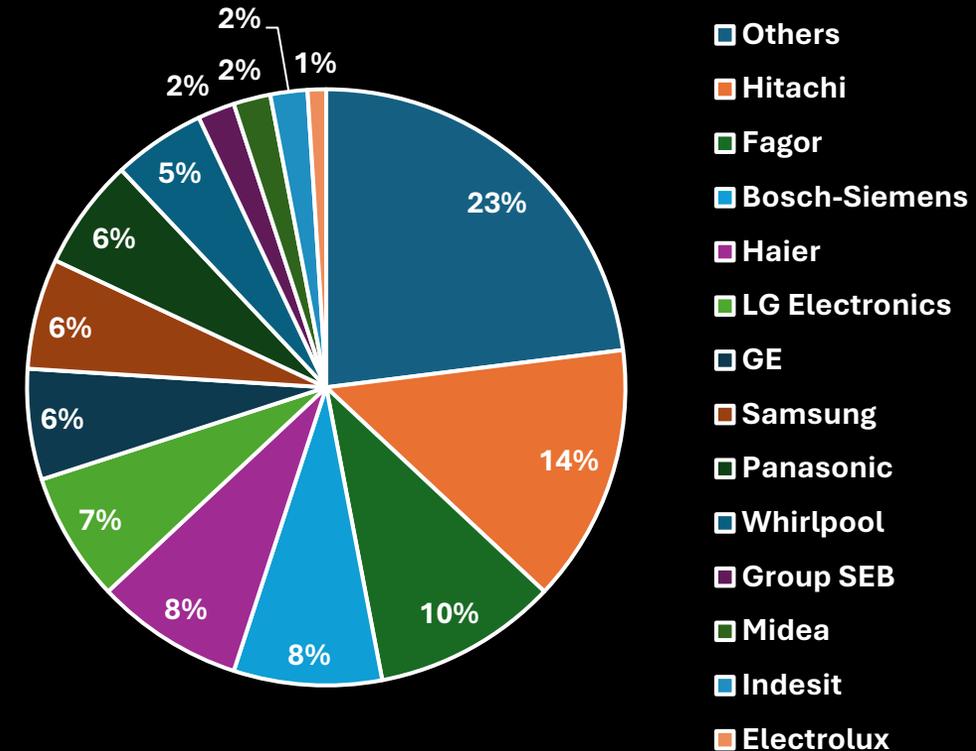
Demand Trends

- Operators focused on labor savings, faster service & consistency of quality
- Rising consumer expectations for speed & transparency push restaurants toward tech adoption

Supply Conditions

- Vendors offering robotic fryers, automated beverage dispensers & digital ordering kiosks
- Cloud-based platforms manage inventory, menus & demand forecasting

Global Smart Appliance Market Share by Company



Food Waste Reduction

Waste reduction emerges as both a cost & sustainability priority

Scale of the Issue

- Roughly one-third of global food production is wasted, driving billions in lost value each year
- Rising pressure from retailers, regulators & ESG investors to address inefficiencies

Corporate & Consumer Response

- Retailers are adopting dynamic pricing, inventory analytics & donation networks
- Consumers increasingly receptive to upcycled products & discount apps for surplus meals

Industry Landscape

- Expanding food waste tech sector across AI forecasting, packaging innovation & redistribution platforms
- Major players include Strella, Too Good To Go, Winnow, OLIO, etc. in sensor-enabled produce management
- Investment focus shifting toward scalable retail & supply-chain solutions over consumer-facing apps

Strella



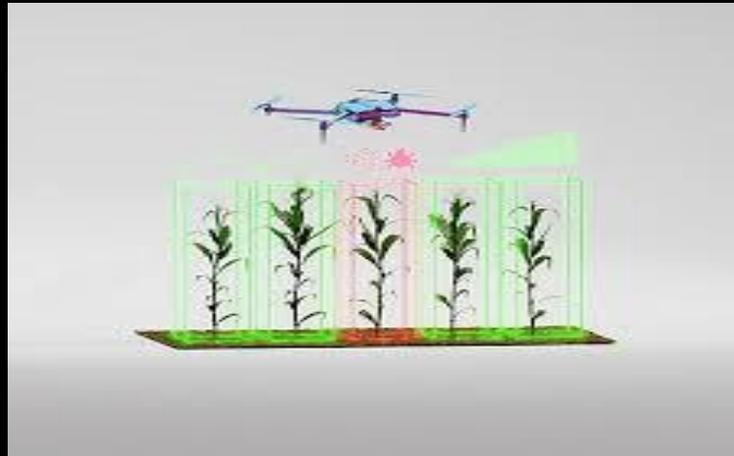
Predictive Intelligence for the Modern Produce Supply Chain



olio



AgTech Trends



Precision Agriculture

Precision agriculture drives measurable savings & resilience for farms

Current Use

- Farmers increasingly adopt auto-steer, variable-rate tech, soil mapping & yield monitors
- Adoption strongest in large row-crop operations

Supply Landscape

- Equipment OEMs bundle guidance, rate control & connectivity solutions
- Software platforms provide planning, prescriptions & compliance tools

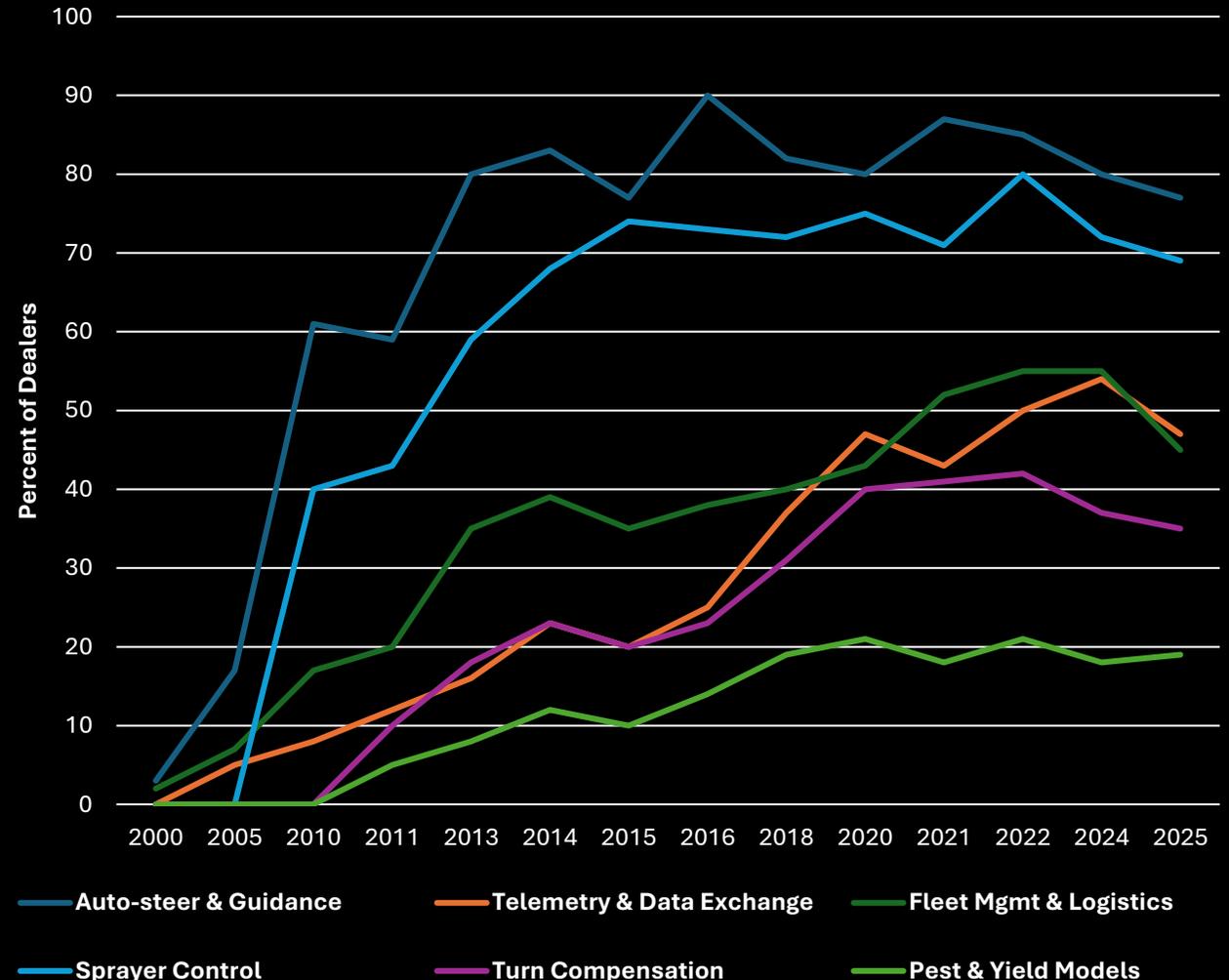
Demand Drivers

- Rising pressure to reduce fertilizer, pesticide & water use
- Demand for yield stability, compliance & sustainability metrics

Challenges

- Cost barriers & integration complexity for smaller operators
- Training & workflow change

Adoption of Precision Agriculture Technologies



Drones & Robotics

Market Scale

- Agricultural drones market valued at ~\$2.7B in 2024
- Strong adoption in Asia-Pacific & North America
- Agricultural robotics market estimated at ~\$16–17B in 2024, covering tractors, weeders & harvesters

Demand Dynamics

- Large-scale farms & specialty crops leading uptake
- Drones-as-a-service models spreading adoption to mid-size farms
- Buyers focus on labor savings, input efficiency & yield consistency

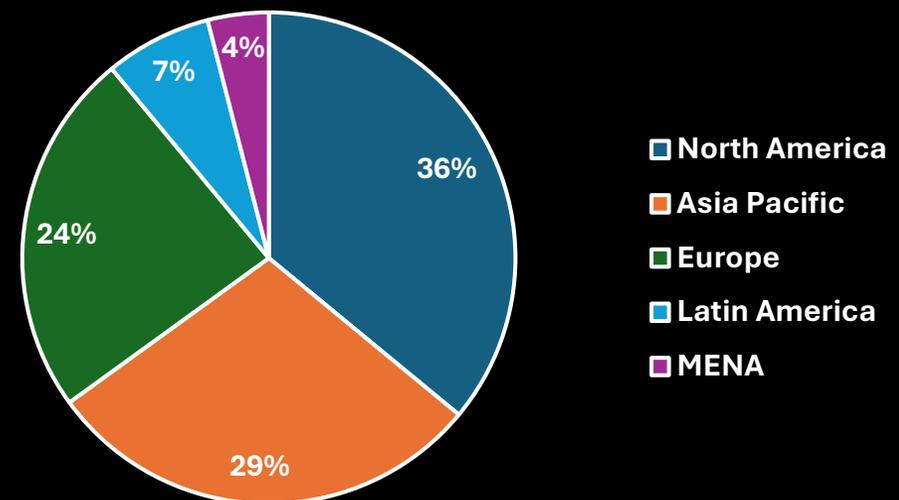
Constraints

- Equipment costs: drones range from \$5K–\$50K+; autonomous tractors >\$300K
- Maintenance & uptime critical to ROI; service networks uneven



Source: Pyka

Drones & Robotic Usage by Region



Livestock Technology

Market Size

- Global livestock technology market valued at ~\$6–7B (2024)
- Precision livestock farming expected to represent ~15–20% of overall agtech spend today

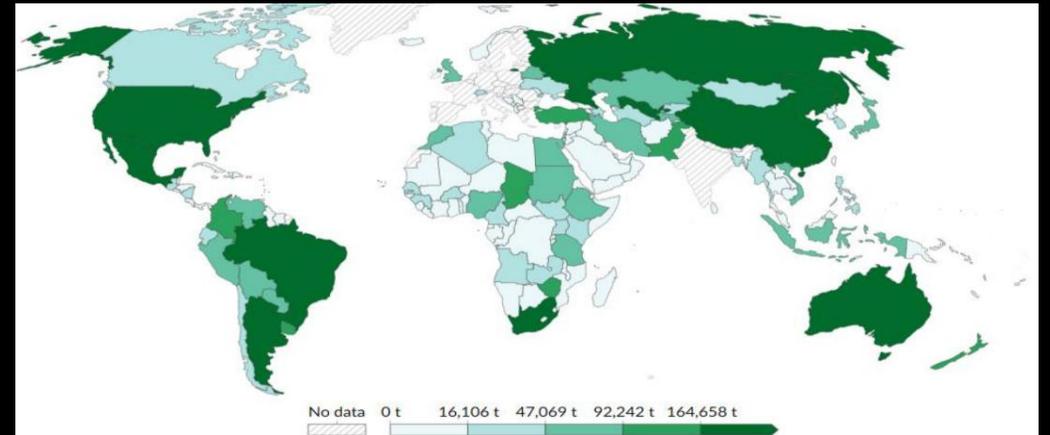
Growth Drivers

- Labor shortages & rising wages in livestock-heavy regions
- Larger animals requiring less to be bred per year to get same result

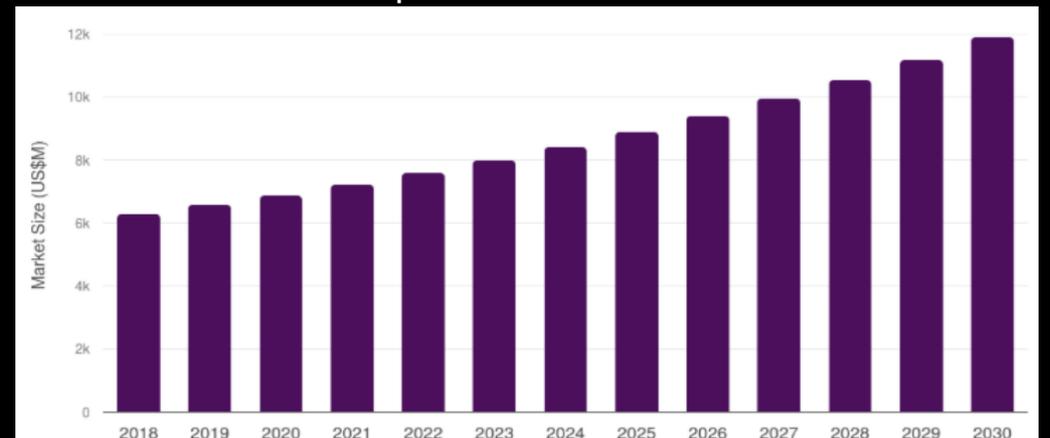
Constraints

- High capex: robotic milking unit costs \$150K–\$250K per installation
- Fragmented data ecosystems and limited integration across vendors slowing scale-up

Production of Cattle



Global Milo Consumption



Digital Supply Chain & Food Traceability

Market Landscape

- Global food traceability market valued at ~\$21.6B in 2024
- North America accounted for ~\$5.2B in 2023

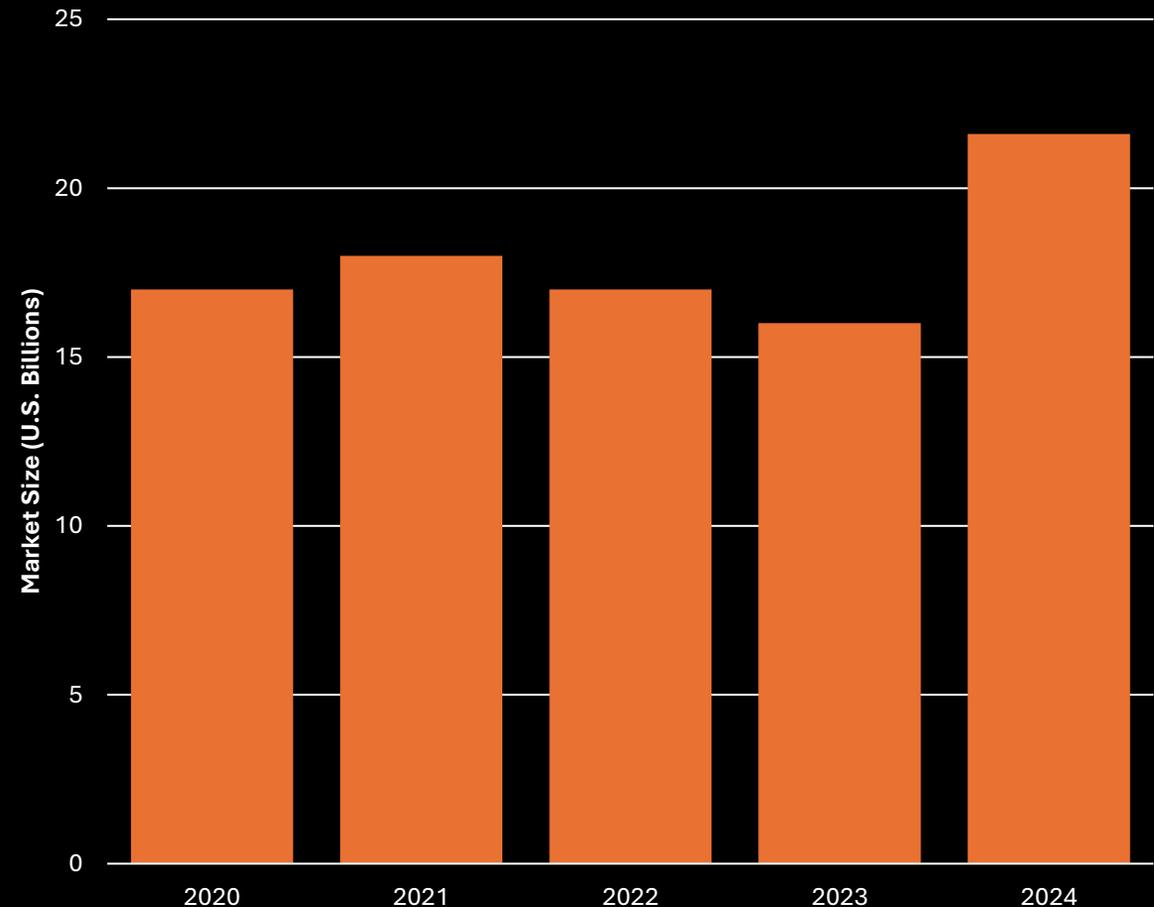
Adoption Metrics

- Ghana & Ivory Coast: 82–83% of directly sourced cocoa traceable
- China & Brazil piloting beef traceability systems in 2024

Applications

- Blockchain & QR for farm-to-retail visibility
- IoT sensors & digital twins for real-time logistics & storage monitoring
- AI-driven analytics optimizing supply chain transparency & predicting disruptions

Food Traceability Market



Biological Inputs, Supply Chain, & Traceability

Market Landscape

- Global crop protection market valued at >\$60B
- Biologicals account for 27% of market value (\$17.6B) vs. synthetics at 73% (\$46.6B)
- Growth supported by regulatory restrictions on synthetic chemicals

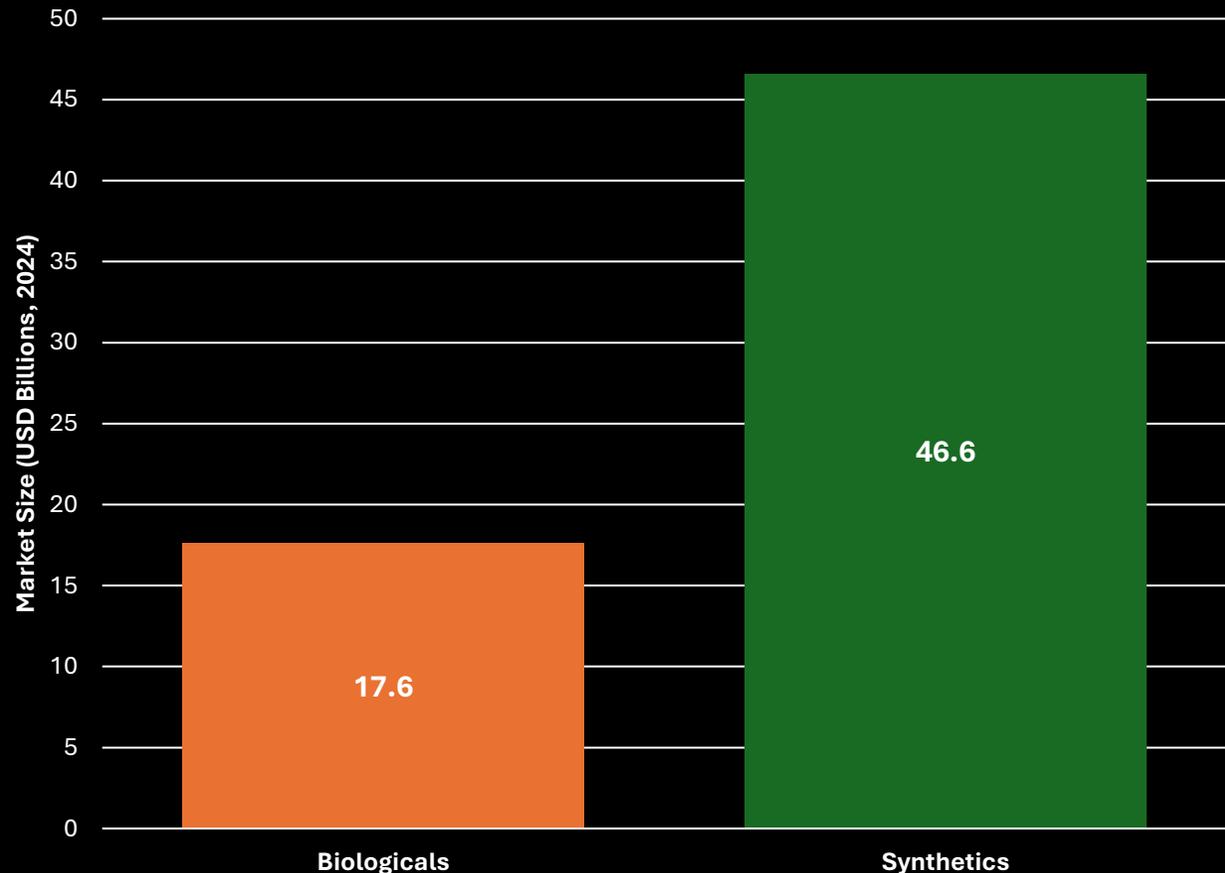
Current Applications

- Biopesticides: microbial & botanical agents for pest & disease control
- Biofertilizers & biostimulants: enhances nutrient uptake, soil health & stress tolerance

Adoption Dynamics

- Strong uptake in high-value specialty crops
- Adoption slower in large-scale row crops due to cost, consistency & distribution hurdles

Global Crop Protection Market (2024)



Controlled Environment Agriculture

Controlled environment agriculture consolidates after boom, with niche resilience

Market Context

- CEA includes greenhouses, vertical farms & indoor systems, herbs & specialty crops
- Global CEA market estimated at ~\$80–90B in 2024, dominated by greenhouse production

Adoption Dynamics

- Vertical farms shifting focus to leafy greens/herbs
- Consolidation underway after capital-intensive failure

Benefits

- Year-round production with greater efficiency
- Potential to reduce supply chain length & improve freshness

Challenges

- Profitability limited by capex intensity & price competition with open-field production
- Scaling constrained to premium urban markets

CEA by Method



Source: KD Market Insights

THE MCLEAN SYNDICATE

Services



- Capital Raising
- Mergers & Acquisitions
- Project Finance
- Business Development
- Market Entry
- Risk Advisory

Our unique approach incorporates well established networks & technology-driven market research to efficiently raise capital for innovative firms & projects

Highly leveraged, ring-fenced financing for specialized investments helps to preserve corporate equity & optimize risk sharing

We support clients in developing new business, entering new markets & assessing risks



Sector Experience

- Real Estate
- Infrastructure
- Financial Services
- Agriculture
- Emerging & Frontier Markets
- Technology
- Healthcare



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