

Agriculture 4.0 is worth €2.3 billion

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In Italy, agriculture 4.0 solutions, such as artificial intelligence, robotics and sensor technology, have come to be worth 2.3 billion euros; in 2017 it was only 100 million.

According to Istat estimates, **Italian agriculture ranks first** in the European Union, ahead of Spain, France and Germany having generated an added value of 42.4 billion euros in 2024 [\[1\]](#). Also growing considerably is the number of software solutions and providers in the agritech sector in the country: agriculture 4.0 solutions, such as artificial intelligence, robotics and sensor technology have increased in value from 100 million in 2017 to the current 2.3 billion euros [\[2\]](#).

Nevertheless, according to data presented today by the Smart Agrifood Observatory of the Politecnico di Milano and Università degli Studi di Brescia, in 2024, in Italy, **only 8% of farms are digitally mature and the agricultural area affected by 4.0 solutions stands at 9.5%.**

To meet global challenges, Italian agriculture and the entire agribusiness supply chain have an extraordinary opportunity offered by technology innovation.

One in three agriculture 4.0 solutions integrates advanced artificial intelligence technologies and predictive analytics, startups offering AI and *machine learning* solutions are growing (+24%) and those providing digital solutions for the agricultural sector (+7%), while new areas of application are emerging, such as *agri-fintech* and *carbon farming*.

These issues were discussed today in Rome at the Ministry of Enterprise and Made in Italy during the **annual FBK research presentation event**, dedicated for 2025 to “*Human-centered agritech. Research and development for people and the environment*” and which brought together businesses, trade organizations and experts with institutions. The event is part of **Fondazione Bruno Kessler’s strategic plan for human-centered AI**, which is committed to this field with major national and international research projects, building on its decades of experience in artificial intelligence, interdisciplinary approach and ability to translate scientific results into application solutions.

In the field of digital agriculture, Fondazione Bruno Kessler has cross-cutting expertise – from computer vision to autonomous robotics, automation, remote sensing, data management and analysis and sensor production -combined with mastery of machine learning techniques, research,

innovation and technology transfer activities. At the European, national and local levels, FBK maintains relationships with key stakeholders in the sector and coordinates major projects, such as the AgrifoodTEF **project**, aimed at developing infrastructure for testing and experimenting with new products and services based on artificial intelligence and robotics, and the CEADS “**Common European Agricultural Data Space**” **project for the creation of a secure and transparent common European data space for agriculture**.

It is, moreover, an integral part of the [new IT4LIA AI Factory initiative](#), which consolidates Italy's role as an international laboratory for innovation, with strategic applications in agritech as well. The initiative is co-funded by the Ministry of University and Research, the National Cybersecurity Agency (ACN), the Emilia-Romagna Region, the CINECA consortium, the National Institute of Nuclear Physics (INFN), the ItaliaMeteo Agency, the Italian Institute of Artificial Intelligence for Industry (AI4I) and Fondazione Bruno Kessler (FBK).

Ferruccio Resta, Fondazione Bruno Kessler's President, said, *“If we want Italy to maintain its leadership in Europe, we must strongly invest in technology and innovation. Our agrifood supply chain is no longer just tradition, but a strategic industrial sector, called to compete on a global scale and to respond to increasingly complex challenges: from drought to resource optimization to market volatility. Digitization and artificial intelligence are not only tools for efficiency, but are key levers for increasing productivity and attracting quality human capital. The future of Italian and European agribusiness will depend on the ability to concretely apply these innovations, building structured and collaborative ecosystems in which knowledge, skills and technologies are truly leveraged. This is the vision that will drive the next revolution in the sector, combining resilience, competitiveness and sustainability.”*

Maurizio Fugatti, president of the Autonomous Province of Trento Government, at the conference “Human-centered agritech. Research and development for people and the environment” at Palazzo Piacentini in Rome: *“First and foremost, it is a source of pride for Trentino to be able to present FBK's work on artificial intelligence in Rome, at the Ministry of Business and Made in Italy, an area that today places it at the forefront internationally. For our territory, with an agricultural vocation, it is also a particular satisfaction to be able to present the applications of AI precisely in the primary sector. We are aware of how crucial data and new technologies are for the future of agriculture, with the goal of improving efficiency, productivity and to ensure the profitability of our enterprises in the sector. FBK, with the entire Trentino research system, is committed to offering this innovation to the whole country, for a future of development, in all areas, in which the human being be always at the center.”*

“Human-centered agritech represents a unique opportunity to increase the visibility of Trentino's quality research on a national and international level,” added Achille Spinelli,

provincial councillor for economic development, labor, university, and research. *An initiative that is in line with the efforts made by Fondazione Bruno Kessler, for years a beacon on the front of advanced technologies, microsystems, quantum technology as well as artificial intelligence. Its applications, from agriculture to health and beyond, are already contributing to the growth of the innovation area by placing Trentino in a strategic position in innovation."*

Valentino Valentini, Deputy Minister Ministry of Enterprise and Made in Italy

concluded the event by emphasizing, "Italian agribusiness is a key pillar of our culture and of our economic and social development. Companies in the sector, like others, are also facing increasingly complex challenges that require the adoption of new digital technologies to stay competitive. New technologies and Artificial Intelligence should not be scary: innovation is on our side and is essential. Particularly in agriculture where the use and management of data allows to automate and optimize agricultural processes, even to the point of helping to cope with increasingly severe weather occurrences. The Ministry and the government support businesses in this transition process because knowledge and tradition combined with technology are a driving force: this is Made in Italy that works "



Andrea Simoni, Valentino Valentini, Deputy Minister for Enterprise and Made in Italy, Ferruccio Resta

The event was attended by: Valentino Valentini, deputy minister of Enterprise and Made in Italy, Giorgio Salvitti, senator and Advisor to the Minister, Ministry of Agriculture, Food Sovereignty and Forestry, Maurizio Fugatti, president of the Autonomous Province of Trento, Chiara Corbo, director of the Smart Agrifood Observatory Politecnico di Milano, Matteo Lorito, president of the National Agritech Center and Chancellor of the University of Naples Federico II, Andrea Rocchi, president of CREA, Francesco Ubertini, president of CINECA, Matteo Lunelli, managing director of Lunelli Group and president and CEO of Ferrari Trento, Luca Brondelli, vice president Confagricoltura, Chiara Di Lorenzo, founder and CSO Glutensens and professor at Milan State University, Riccardo Felicetti, CEO Pastificio Felicetti, Massimo Ferro, corporate strategy director Nestlé and president Industrial Board Centro Nazionale Agritech, Francesca Protano, head of Technology Strategy and Product Innovation, CNH.

^[1] Istat, *Preliminary estimate of the economic accounts of agriculture 2024*.

^[2] Source: Osservatorio Smart Agrifood del Politecnico di Milano e dell'Università degli Studi di Brescia.

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